8-1-2012

IS THERE JUSTICE IN TRAUMA? A PATH ANALYSIS OF BELIEF IN A JUST WORLD, COPING, MEANING MAKING, AND POSTTRAUMATIC GROWTH IN FEMALE SEXUAL ASSAULT SURVIVORS

Danielle Grace Fetty
Southern Illinois University Carbondale, dfetty@siu.edu

IS THERE JUSTICE IN TRAUMA?

A PATH ANALYSIS OF BELIEF IN A JUST WORLD, COPING, MEANING MAKING, AND POSTTRAUMATIC GROWTH IN FEMALE SEXUAL ASSAULT SURVIVORS

by

Danielle Grace Fetty

B.A., University of Tennessee, Knoxville, 2009

A Thesis

Submitted in Partial Fulfillment of the Requirements for the

Master of Arts Degree

Department of Psychology

in the Graduate School

Southern Illinois University Carbondale

August 2012

THESIS APPROVAL

IS THERE JUSTICE IN TRAUMA?
A PATH ANALYSIS OF BELIEF IN A JUST WORLD, COPING, MEANING MAKING, AND POSTTRAUMATIC GROWTH IN FEMALE SEXUAL ASSAULT SURVIVORS

By

Danielle Grace Fetty

A Thesis Submitted in Partial

Fulfillment of the Requirements

for the Degree of

Master of Arts Degree

in the field of Psychology

Approved by:

Yu-Wei Wang, PhD., Chair

Benjamin Rodriguez, PhD.

Ann Fischer, PhD.

Graduate School
Southern Illinois University Carbondale
May 16, 2012

AN ABSTRACT OF THE THESIS OF

DANIELLE GRACE FETTY, for the Master of Arts degree in PSYCHOLOGY, presented on May 16, 2012, at Southern Illinois University Carbondale.

TITLE: IS THERE JUSTICE IN TRAUMA? A PATH ANALYSIS OF BELIEF IN A JUST WORLD, COPING, MEANING MAKING, POSTTRAUMATIC GROWTH IN FEMALE SEXUAL ASSAULT SURVIVORS

MAJOR PROFESSOR: Yu-Wei Wang, PhD

By using the theoretical framework developed by Schaefer and Moos (1998), this study examined the mechanisms through which personal beliefs in ultimate justice affect posttraumatic growth in female survivors of sexual assault. Problem solving, spiritual coping, and meaning making were examined as potential mediators between beliefs in ultimate justice and posttraumatic growth through a path analysis. In total, 144 female community survivors, psychology students, and other participants were recruited from a large mid-western university (mean age = 29.3). The online survey was composed of a demographic questionnaire, the Revised Sexual Experiences Survey (Koss et al., 2007), Emotion Thermometer (Mitchell, 2001), Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996), Belief in Immanent and Ultimate Justice Scale (Maes, 1998), Trauma Resilience Scale (Madsen & Abell, 2010), and the Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2006). Results indicate that problem solving and spirituality significantly mediated the relationship between belief in ultimate justice and posttraumatic growth. Search for meaning significantly mediated the relationship between beliefs in ultimate justice and distress. Implications for practice and research are discussed.

Keywords: sexual assault, posttraumatic growth, belief in a just world, meaning making, coping

DEDICATION

I would like to thank first and foremost my dear friends David Eldridge, Leannah Lee, and Trish Lisnak Cunningham who have helped me get to where I am today. If it were not for your enduring friendship, love, and caring, I would have never been able to accomplish all that I have. I thank you for staying with me through all the stress and tears, and always believing that I could make it through, even when I doubted that I could myself. And thank you to my brother, Christopher, who was always there for me when life got tough. To my parents, I owe an unending wealth of thanks. You taught me the importance of hard work and dedication, and fostered in me the character and values which have made me the person I am today. You never were surprised at my achievements because you never expected I could accomplish anything less than great, and I appreciate your love and support through all the years.

To my cohort, you have become a family to me and I cannot begin to describe my appreciation for the support you have offered. I thank Aaron for being my voice of reason and forcing me to take care of myself when I tried to work too hard, and I thank Brittany for your support and genuine caring which gave me strength to continue. I must also thank Greg and Aditi for reminding me to not take life too seriously, and always take the time to laugh.

There have been numerous others who have been instrumental in this process. I must thank Chris Michaels for all of his help with recruitment and data collection. In addition, I could not have done this without the help of Julia Conrath, PhD. and Katharina Dieckhoff who spent countless hours translating and back-translating my scales.

Finally, without the support, hard work, and dedication of my advisor, Dr. Yu-Wei Wang, this process would not have been possible. Thank you for teaching me what it means to be a researcher, and for being patient and supportive on the days I felt like giving up. I cannot convey how much I appreciate your guidance every step of the way.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

FIGURE PAGE

CHAPTER 1

INTRODUCTION

Sexual violence has been demonstrated to be a worldwide issue that affects millions of individuals every year, with nearly 30% of women reporting being the victims of rape or attempted rape in their lifetime (Resick, 2001). Research on sexual assault and the psychology of women has increased in the decades since the feminist movement began, which aimed to improve women's rights. But there are still important aspects that need to be understood about how women are able to cope with and overcome their traumatic experiences. The current study focuses specifically on female sexual assault survivors because (a) most of the victims are women (Resick, 2001), (b) much of the research to date has examined the experiences of female survivors (Frazier & Berman, 2008), and (c) there may be possible gender differences in the process of posttraumatic growth and coping (Tedeschi & Calhoun, 1996).

Much remains to be learned about the mechanisms through which posttraumatic growth is achieved in female survivors of sexual assault (Frazier & Berman, 2008). Understanding how belief in a just world contributes to posttraumatic growth through its influence on coping and meaning making is extremely important and relevant, and holds profound implications for possible future therapeutic interventions. This topic is also critical to the field of Counseling Psychology as a whole as future research is needed to further understand how counselors and psychologists can help survivors of sexual violence heal from sexual trauma.

Because of the nature of sexual trauma, it is understandable that the positive aspects of recovery have not been emphasized. The majority of research has studied the sequelae of trauma and neglected the role of positive coping and growth (Folkman, 2008; Frazier & Berman, 2008). However, research in recent years has shown the importance that coping may play in recovery

and the capacity for growth after traumatic events, including sexual assault (Frazier, Conlon, & Glaser, 2001). While sexual violence is a very frightening and overwhelming experience which can have a profound negative impact on survivors, these same survivors often have the ability to overcome their experience and grow in ways they had not thought possible. Thus, it is of the utmost importance to find the mechanisms which promote this growth.

Posttraumatic growth after a stressful life event has been a growing area of research within the fields of trauma and positive psychology literature, and has received a great deal of attention in recent years (Frazier & Berman, 2008; Grubaugh, 2007; Park & Ai, 2006; Tedeschi & Calhoun, 1996; Tedeschi, Park, & Calhoun, 1998). According to Tedeschi and Calhoun (1996) and Tedeschi et al. (1998), posttraumatic growth generally refers to three major areas of change. The first area is positive change in perception of self, which includes increased self reliance and vulnerability (Tedeschi & Calhoun, 1996; Tedeschi et al., 1998). The second area includes positive changes in interpersonal relationships such as self-disclosure and emotional expressiveness, compassion and giving to others (Tedeschi & Calhoun, 1996; Tedeschi et al., 1998). The third area involves changes in philosophy of life which includes changes in priorities and appreciation of life, sense of meaning, spirituality, and wisdom (Tedeschi & Calhoun, 1996; Tedeschi et al., 1998). In short, posttraumatic growth is commonly defined in terms of survivors' perceptions that healing from their trauma has presented them with new possibilities, positive changes in relating to others, positive changes in personal strengths, greater appreciation for life, and positive changes in spirituality (Tedeschi & Calhoun, 1996).

Schaefer and Moos (1992, 1998) presented a conceptual model of posttraumatic growth that accounts for environmental, personal, crisis, coping, and outcome factors in the process of posttraumatic growth. This model has been the framework used in some posttraumatic growth

research with sexual assault survivors (Frazier & Berman, 2008), as well as survivors of other types of trauma such as natural disasters (Saylor, Swenson, & Powell, 1992), war (Rosenthal & Levy-Shiff, 1993), cancer (Zemore, Rinholm, Shepel, & Richards, 1989), HIV infection (Shwartzberg, 1994), and bereavement (Calhoun & Tedeschi, 1989/1990, as cited in Schaefer & Moos, 1992). The personal and environmental systems influence the experience of the crisis, which in turn influence the appraisal and coping of the crisis and the subsequent outcomes of growth (Schaefer & Moos, 1992, 1998). The personal system includes factors about the individual prior to the trauma, such as personal efficacy, resilience, traits and characteristics, worldview, and prior trauma. The environmental system includes factors related to social support from family, friends, coworkers, and others. The event or crisis related system includes factors such as the severity, frequency, and duration of the trauma (Schaefer & Moos, 1992, 1998). This model utilizes an approach/avoidance coping and positive appraisal framework where survivors either approach and appraise their crisis, or avoid their crisis by minimizing and denying it. Outcomes and growth are then categorized into three broad categories of enhanced social resources, enhanced personal resources, and enhanced coping resources (Schaefer & Moos, 1992, 1998). The current study aims to test Schaefer and Moos' (1998) model of posttraumatic growth by examining the potential mediating roles of coping and appraisal in the relation between sexual assault survivors' personal beliefs and levels of posttraumatic growth.

Belief in a just world can be understood as preexisting world views and beliefs within the personal system of the Schaefer and Moos' (1992, 1998) model of posttraumatic growth. Such beliefs may influence how survivors interpret, cope, and appraise their trauma, which subsequently influence their levels of posttraumatic growth. Lerner (1980) originally spoke of belief in a just world as a social phenomenon that society devised as a means of making

attributions, and as inextricably bound to people's goals in life (Lerner, 1980). He posited that not only is the assumption that the world is fair and just a functional assumption, but it is also a necessary one for people to be able to function and cope in their daily lives. Lerner's (1980) theory informed that of Janoff-Bulman (1992, 2006) who found that survivors of trauma are forced to "make sense" of an event when it conflicts with beliefs that the world is benevolent, meaningful, and that the self is worthy. Just world beliefs and assumptions have typically been studied in research that examined the manner in which blame is attributed to victims of crimes, natural disasters or other unfortunate circumstances (Furnham, 2003). Prior research has adequately shown observers who have strong beliefs in a just world attribute blame to sexual assault victims (Furnham & Boston, 1996; Murray, Spadfore, & McIntosh, 2005).

However, little research has observed the influence of belief in a just world from sexual assault victims' perspective and in relation to posttraumatic growth. Recent research has actually shown the positive benefits of holding just world beliefs in responding to trauma (Dalbert, 1998; Fetchenhauer, 2005; Furnham & Boston, 1996). It seems that there may be important differences in how sexual assault survivors respond to trauma based on whether they endorse immanent or ultimate justice beliefs (Maes & Schmitt, 1999). Maes (1998b) referred to immanent justice in terms of the immediate or swift compensation of suffering, such as from the criminal justice system, whereas ultimate justice refers to an eventual or long term "righting of wrongs," and can often be understood from a religious or spiritual framework of being rewarded for one's suffering. Ultimate justice may be especially relevant for sexual assault survivors' healing, as swift justice is often not achieved and because survivors have described spirituality as an important coping strategy leading to posttraumatic growth (Maes & Schmitt, 1999).

Much research has been dedicated to learning how survivors of sexual assault utilize various coping strategies and examined how different methods of coping may be more or less effective for survivors in achieving healing and posttraumatic growth from the trauma (Bell, 1999; Burt & Katz, 1988; Frazier & Burnett, 1994; Littleton & Breitkopf, 2006; Morris, Shakespeare-Finch, & Scott, 2007). Schaefer and Moos (1998) discussed the importance of approach/avoidance coping and appraisal of trauma in their model of posttraumatic growth. They posited that approach coping allows survivors to reappraise the crisis in a positive way, seek support, and engage in problem solving strategies. (Schaefer & Moos, 1998). Approach coping/problem solving strategies have been found to positively predict posttraumatic growth in sexual assault and other trauma survivors (Frazier, Tashiro, Berman, Steger, & Long, 2004). Similarly, Bell (1999) found that problem-focused coping strategies were effective for survivors. In addition, spiritual coping has been cited as an important strategy for survivors of sexual assault and other types of trauma (Frazier et al., 2004; Prati & Pietrantoni, 2009; Tedeschi & Calhoun, 1996), and may prompt survivors to reappraise their trauma, and provide a framework from which survivors can adjust their global meaning system and just world beliefs (Ahrens, Abeling, Ahmad, & Hinman, 2010; Frazier et al., 2004; Pargament & Mahoney, 2009; Park, 2005).

Furthermore, meaning making can be understood within the coping and appraisal system of the Schaefer and Moos' (1992, 1998) model of posttraumatic growth. Meaning making has been a growing area of interest in research on survivors of traumatic events, but relevant research has been lacking for sexual assault survivors (Cromer & Smyth, 2010; Lindner, 2010; McElroy, 2010; Park, 2008, 2010; Park & Ai, 2006; Pipinelli & Kalayjian, 2010; Wright, Crawford, & Sebastian, 2007). Finding meaning in a difficult experience can often help survivors overcome

their trauma, as it leads them to examine the event and decide how it fits in with their global meaning system (Park & Ai, 2006). The search for meaning may lead survivors to examine the event from a different perspective and reinterpret it in a different light (Janoff-Bulman, 2006; Park, 2008, 2010). Because traumatic events often violate survivors' just world assumptions (Janoff-Bulman, 2006), survivors may attempt to make sense of events that do not fit their life and world assumptions, and thus are more motivated to find meaning in events that seem meaningless (Davis, Wohl, & Verberg, 2007). These findings were supported by Frazier and Burnett (1994), who also reported that making positive meaning from sexual assault has also been identified by survivors as a positive and effective coping strategy.

In this study, three coping mechanisms—problem solving, spiritual coping, and meaning making—and their mediating roles in the relationship between beliefs in ultimate justice and posttraumatic growth are examined. Although there has been ample research on each of these coping mechanisms, no study to date has examined the impact of all three coping strategies on posttraumatic growth in relation to beliefs in ultimate justice. In addition, there has been relatively little research examining variables such as coping, meaning making, and belief in a just world on posttraumatic growth for sexual assault survivors, and even less examining the influence of beliefs in ultimate justice. Thus, this study aims to explain some of the mechanisms through which beliefs in ultimate justice influence posttraumatic growth of female sexual assault survivors. A secondary goal is to test Schaefer and Moos' (1992, 1998) model of posttraumatic growth in the sexual assault survivor population. Specifically, based on Schaefer and Moos' model (1992, 1998) and the relevant research findings, I have generated the following three hypotheses.

Hypothesis 1: Beliefs in ultimate justice would be positively correlated with levels of posttraumatic growth.

Hypothesis 2: Use of problem solving, spiritual coping, and meaning making strategies would be positively correlated with levels of posttraumatic growth.

Hypothesis 3: Problem solving, spiritual coping, and meaning making would partially mediate the relationship between beliefs in ultimate justice and posttraumatic growth. This suggests that higher levels of beliefs in ultimate justice among sexual assault survivors would lead to more use of problem solving, spiritual coping, and meaning making strategies, which in turn would result in higher levels of posttraumatic growth.

CHAPTER 2

LITERATURE REVIEW

While there has been a thriving programmatic line of research on sexual violence in recent decades, much still remains to be understood about survivors' experiences of assault (Burt & Katz, 1988; Frazier & Berman, 2008; Resick, 2001). Calhoun and Tedeschi (1998) have proclaimed that the next step in posttraumatic growth research is to find the processes through which it occurs. More recently, Frazier and Berman (2008) also have called for more research identifying the various mediators which may explain the path to posttraumatic growth after sexual violence. By studying and further exploring the experience of survivors' growth and healing from sexual assault and some of the variables that influence growth, researchers and practitioners can better aid these individuals in their journey of recovery. The current study focuses specifically on female sexual assault survivors because (a) most of the victims of sexual violence are women (Resick, 2001), (b) much of the research to date has examined the experiences of female survivors (Frazier & Berman, 2008), and (c) there may be possible gender differences in the process of posttraumatic growth and coping (Tedeschi & Calhoun, 1996). Thus, while much remains to be learned about survivors from different backgrounds, more research is needed prior to examining the variables of interest in other groups of sexual assault survivors.

The current study employs the Schaefer and Moos' (1998) model of posttraumatic growth as a framework to examine the factors that contribute to posttraumatic growth of female sexual assault survivors. Specifically, this study aims to fill current gaps in the literature by further exploring the relationship between just world beliefs and posttraumatic growth outcomes and by empirically examining the mediating roles of coping and meaning making in such relationships.

The literature review will commence by first providing a definition of posttraumatic growth and introducing relevant theories and empirical research. Then, the theory and research of just world beliefs and related aspects such as immanent and ultimate justice will be discussed. Subsequently, coping and meaning making as related to sexual assault and posttraumatic growth will be discussed. Lastly, a synopsis of the current study and its importance, along with the proposed hypotheses are presented.

Posttraumatic Growth

Trauma has most often been studied in terms of the negative consequences on an individual's life, but research suggests that there are a number of outcomes, both positive and negative, that can result from a traumatic experience (Folkman, 2008; Frazier, Conlon, and Glaser, 2001; Frazier & Berman, 2008; Grubaugh & Resick, 2007). In fact, posttraumatic growth is an area that has received a great deal of attention in recent years (Frazier & Berman, 2008; Grubaugh & Resick, 2007; Park & Ai, 2006; Tedeschi & Calhoun, 1996; Tedeschi, Park, & Calhoun, 1998). However, posttraumatic growth following sexual assault has received relatively much less attention, and sexual assault differs from other types of trauma because it involves intentional harm, humiliation, and additional stigma compared to illness, bereavement, and natural disasters (Frazier & Berman, 2008). Sexual assault has been found to be the leading cause of Post Traumatic Stress Disorder among women, with the disorder affecting nearly 30% of sexual assault survivors in their lifetime (Resick, 2001). Sexual violence has been associated with a wide variety of negative sequela such as increased negative views about self and the world (Janoff-Bulman, 1992), decreased self-esteem, increased substance use (Cecil & Matson, 2006), greater chance of psychopathology, poorer work and social adjustment, increased physical and mental symptoms, and greater use of medical and mental health services (Koss, Figueredo, &

Prince, 2002). Research on posttraumatic growth experienced by sexual assault survivors is not meant to diminish the distress sexual assault survivors withstand as a result of their experience, but only to suggest that there are a broad array of positive and negative emotional and psychological reactions to trauma, which can exist simultaneously and which may be influenced by a survivor's resilience, coping, and meaning making efforts (Frazier & Berman, 2008).

It is also important to note that sexual violence is a societal problem which occurs as a result of, and is supported by, environmental factors (Klaw et al., 2005). Acceptance of rape culture (i.e. acceptance and support of violence against women) and rape myths foster an environment in which sexual violence is perpetuated (Burnette et al, 2009). Much research in the past has focused on the pathology of being victimized, and has inadvertently served to continue blaming the victim, while leaving the realm of perpetration untouched (Klaw et al., 2005). Continued focus on victim pathology, while ignoring perpetrators and societal factors which foster violence, only reinforces beliefs that sexual violence is the "problem of those who experience it." While the study at hand focuses on the aspects of the survivor's experience and growth, it is important to realize that these experiences and growth happen in a larger context – one that may foster or inhibit healing. As such, it should be recognized that not all survivors achieve posttraumatic growth, nor is it to be considered the "right" way to heal; if that process does not occur, blame should be shouldered by the society inhibiting that growth, rather than the survivor.

In addition, posttraumatic growth is a life-long healing process and some individuals may struggle with how to define themselves. Terms such as "survivor" and "victim" are often used interchangeably, and may insinuate different stages of the healing process. However, the choice

to label one's self as either "victim" or "survivor" is a personal and subjective choice, and one must not identify with a specific label in order to achieve growth.

Definition of Posttraumatic Growth

Posttraumatic growth is commonly defined in terms of survivors' perceptions that healing from their trauma has presented them with new possibilities, positive changes in personal strengths, positive changes in relating to others, greater appreciation for life, and positive changes in spirituality (Tedeschi & Calhoun, 1996). These areas are often condensed into three major spheres of change—changes in perception of self, interpersonal relationships, and philosophy of life (Tedeschi et al., 1998).

The first area is positive changes in perception of self, which include increased self-reliance and vulnerability (Tedeschi & Calhoun, 1996). One of the most important changes in the process of posttraumatic growth includes changes in how the individual sees and labels him or herself. This involves no longer labeling oneself as a victim, but as a survivor. In addition, recognizing one's strength and gaining a sense of self-reliance is paramount. While the survivor may feel an increased self-strength, they may also recognize that they have some sense of vulnerability and mortality, which follows from an increased understanding of self and the experience (Tedeschi et al., 1998).

The second area includes positive changes in interpersonal relationships (Tedeschi & Calhoun, 1996; Tedeschi et al., 1998). Aspects of increased relations with others include self-disclosure, emotional expressiveness, compassion, and giving to others. Some survivors reported that positive social support promoted self-disclosure and openness to others, which in turn promoted emotional intimacy and feelings of safety (Tedeschi & Calhoun, 1996). Of course, self-disclosure is not always a positive experience, especially when survivors receive negative

reactions (Ullman, 1996). However, self-disclosure is considered a positive aspect of growth in the sense that it allows the survivor to express herself, discuss and process the trauma, and forge emotionally intimate relationships with others (Tedeschi & Calhoun, 1996). In addition, through recognizing one's vulnerability and strengthening social supports, one may develop an increased capacity for compassion and empathy, and possibly a desire to help others of similar struggles (Tedeschi et al., 1998).

The third area of posttraumatic growth involves changes in philosophy of life which includes changes in priorities and appreciation of life, sense of meaning, spirituality, and wisdom (Tedeschi & Calhoun, 1996; Tedeschi et al., 1998). Many survivors report feeling that they have been spared, and that they now have a greater understanding of what is truly important in life (Tedeschi & Calhoun, 1996). They understand what their priorities are, and no longer worry about the small things in life. Trauma survivors who have experienced rape, illness, and accidents are also sometimes forced to confront existential matters and question the purpose and meaning in life, though this may not necessarily be considered a positive aspect of the process (Tedeschi & Calhoun, 1996). Moreover, increased spirituality is also a very important aspect of posttraumatic growth for many trauma survivors and will be described in greater detail later. Increased wisdom is also considered a part of posttraumatic growth (Tedeschi & Calhoun, 1996). Concepts of wisdom vary by culture, as do definitions, but it can be thought of as increased knowledge of self, others, life experience, and how to cope with difficult experiences (Tedeschi et al., 1998).

Schaefer and Moos' (1992, 1998) Model of Posttraumatic Growth

Schaefer and Moos (1992, 1998) presented a conceptual model of posttraumatic growth that accounts for environmental, personal, crisis, coping, and outcome factors in the process of

posttraumatic growth. This model has been the framework used for some of the posttraumatic growth research in sexual assault (Frazier & Berman, 2008), as well as survivors of other types of trauma such as natural disasters (Saylor et al., 1992), war (Rosenthal & Levy-Shiff, 1993), cancer (Zemore et al., 1989), HIV infection (Shwartzberg, 1994), and bereavement (Calhoun & Tedeschi, 1989/1990, as cited in Schaefer & Moos, 1992). This model serves as the conceptual framework through which the current study examines posttraumatic growth and the associated variables.

According to this model, there are five systems that interact dynamically to influence the positive growth (Schaefer & Moos, 1992, 1998). The environmental (S-I) and personal (S-II) systems influence the experience of the crisis (S-III), which in turn influences the appraisal of and coping with the crisis (S-IV) and the subsequent outcomes of growth (S-V). The environmental system (S-I) includes variables such as social support (e.g. support from family, friends, and coworkers), financial resources, and living situations (e.g. having a safe and stable place to live). The personal system (S-II) includes individual factors such as demographic characteristics, prior trauma, personal efficacy, resilience, traits, personal beliefs, and worldview. The event or crisis related system (S-III) includes factors such as the severity, frequency, and duration of the trauma. This model utilizes an approach/avoidance coping and positive appraisal framework (S-IV) which postulates that survivors either approach their situations and seek social support, problem-solve, analyze, and process their crisis in a positive way, or they avoid their crisis by minimizing and denying it. Outcomes of growth (S-V) are then categorized into three broad categories of enhanced social, personal, and coping resources. Enhanced social resources refer to better social support from friends and family and secure relationships. Enhanced personal resources include being more assertive, understanding oneself better, having increased empathy

and maturity. Lastly, enhanced coping skills involve better problem-solving skills and being able to ask for help when needed (Schaefer & Moos, 1992, 1998).

An extended version of Schaefer and Moos' (1992, 1998) model was tested by including the variables under investigation in the current study. Because the personal system involves pre-existing aspects of a person such as one's beliefs, assumptions, and traits, it follows that one's worldview and way of understanding the world is a part of this system. As belief in a just world is part of one's worldviews, it was examined as a S-II variable which was hypothesized by Schaefer and Moos (1992, 1998) to influence how one appraises (makes meaning of) and copes with one's trauma (S-IV), and subsequently achieves posttraumatic growth (S-V). The current study investigates part of Schaefer and Moos' model by empirically examining the potential mediating roles of coping and meaning making in the relationship between belief in a just world and posttraumatic growth outcomes.

Experiences and Correlates of Posttraumatic Growth

Research suggests that posttraumatic growth is not an uncommon (though certainly not a guaranteed) occurrence, and may not necessarily be the excessively long process it was once thought to be (Schaefer & Moos, 1998; Tedeschi et al., 1998). Frazier and colleagues (2001) examined 171 sexual assault victims in a longitudinal study and found that survivors experienced both positive and negative life changes post-assault, with 91% reporting at least one positive life change as early as two weeks post-rape. A previous study by Frazier and Burnett (1994) showed that 57% of rape survivors reported positive life changes, such as appreciating life more, as soon as three days following the sexual assault incidents.

Though survivors experienced both positive and negative changes simultaneously, positive changes tend to increase over time, and negative changes tend to decrease naturally over

time (Frazier et al., 2001). However, it is important to note that the relationship between positive and negative life changes after sexual assault is not linear. While on average positive changes increased and negative changes decreased, hierarchical linear modeling showed significant variability between individuals. Some survivors may initially feel numb and then experience an increase in negative changes while attempting to cope with the experience before experiencing more positive life changes (Frazier et al., 2001). In fact, in a study of 100 adult female treatment-seeking sexual assault survivors, Grubaugh and Resick (2007) found a complex relationship between posttraumatic growth and psychological distress (e.g., reporting symptoms of depression and Post Traumatic Stress Disorder). Of the 100 women, all but one reported some posttraumatic growth, and 45% reported at least moderate levels of growth. However, approximately 91% also met criteria for PTSD, 54% met criteria for depression, and 52% met criteria for both. Results suggest that posttraumatic growth and distress can exist independent of each other, and significant distress may even influence survivors to address their trauma and attempt to heal (Grubaugh & Resick, 2007). In short, these research findings highlight the need for additional studies about the course and contributing factors of posttraumatic growth.

In a study of positive and negative life changes after sexual assault by Frazier and colleagues (2001), negative changes include weakened belief in the goodness, safety, and fairness of the world and other people, which are consistent with the theory that trauma negatively impacts one's world assumptions (Frazier, Conlon, and Glaser, 2001; Janoff-Bulman, 1992; Koss & Figueredo, 2004). However, there is a wide range of possible reactions that a survivor may experience in addition to the ones found in the aforementioned studies (Frazier et al., 2001). The most prominent positive changes included increased empathy, improved relationships, and an increased appreciation for life (Frazier & Berman, 2008). In addition,

positive changes in self and spirituality were most associated with reduced levels of distress (Frazier, Conlon, and Glaser, 2001).

In a study by Frazier and colleagues (2004), social support, positive reframing, approach coping, religious coping, and perceptions of control over the recovery process have been cited as the strongest predictors of posttraumatic growth (Frazier, Tashiro, Berman, Steger, & Long, 2004). Their findings also support Schaefer and Moos' model (1998) by showing that control over the recovery process (S-IV) mediates the relationship between resources such as social support (S-I) and growth (S-V). One possible explanation for this finding is that survivors who have more social support resources may feel that they have more control over the recovery process, which in turn leads to higher levels of posttraumatic growth. In light of the findings by Frazier et al. (2004), it is reasonable to suspect that those who utilize coping strategies which are within the survivor's personal control (such as increased spiritual coping, problem-solving coping, or meaning making) may feel increased confidence and control over the recovery process, possibly leading to increased posttraumatic growth.

Summary and Critique

In sum, posttraumatic growth can be conceptualized based on Tedeschi and Calhoun's definition, including positive life changes in perception of self, relationships with others, and changes in philosophy of life (Tedeschi & Calhoun, 1996; Tedeschi et al., 1998). Schaefer and Moos (1998) provided a conceptual model of posttraumatic growth and postulated growth as a process which is influenced by environmental, personal, crisis, and coping/appraisal. Research has shown that while not all sexual assault survivors experience positive life changes, many do report positive changes (Frazier & Berman, 2008) and often quite soon after the assault (Frazier et al., 2001). Preliminary research has suggested that social support, perceptions of control, and

coping are strong correlates of posttraumatic growth (Frazier et al., 2004). However, research on the path that leads to posttraumatic growth is still lacking. More research is needed to examine the roles of other variables (such as individual worldview/beliefs and coping/appraisal) included in the Schaefer and Moos' model (1998). Thus, the current study aims to test part of Schaefer and Moos' model by investigating the potential mediating roles of coping/appraisal (S-IV) in the relationship between individual worldviews/beliefs (S-II) and posttraumatic growth (S-V).

Belief in a Just World

Belief in a just world has a long history of research in psychology, and is a widely found phenomenon (Dalbert, 1998; Furnham, 2003; Janoff-Bulman, 1992; Lerner, 1980; Lucas et al., 2008). Though research has demonstrated this concept in a wide range of settings, unfortunately, relatively little research has examined belief in a just world specifically within sexual assault survivors (Furnham, 2003). In keeping with the Schaefer and Moos' (1998) model of posttraumatic growth, belief in a just world is examined here as a Personal system (System II) variable which includes aspects of an individual prior to the trauma such as beliefs, assumptions, values, traits, personality, and worldview. Because most individuals have general world assumptions, such as "the world is a good place", "people are inherently good", and "evil will not triumph over good" (Lerner, 1980), these assumptions directly relate to one's worldview (S-II) of Schaefer and Moos' (1998) model of posttraumatic growth. These person factors are important to the development of posttraumatic growth because they directly influence how an individual copes and appraises a traumatic event, and subsequently affect the outcome of posttraumatic growth (Schaefer & Moos, 1998). The effect of such beliefs on coping is consistent with the theory of the just-world beliefs (Lerner, 1980) and assumptive-world theories (Janoff-Bulman, 1992).

Theories about Just World Beliefs and Assumptions

Belief in a just world is a concept that has often been studied in relation to a wide variety of phenomenon from natural disasters, cancer, and perceptions of blame and responsibility of sexual assault survivors (Furnham, 2003). However, relatively little research has examined how this world belief influences a sexual assault survivor, or how it may aid or inhibit a survivor's achievement of posttraumatic growth. Lerner (1980) developed the theory of the just world as an explanation to how people understand and behave in the world. The theory suggests that, on the most basic level, people get what they deserve based on their behavior and attributes. If someone behaves well and has positive attributes such as being kind, selfless, hardworking, and generous, then that individual is deserving of positive outcomes. On the other hand, if an individual commits crimes or other wrong behaviors, and is cruel, selfish, and lazy, then that individual deserves negative outcomes (Lerner, 1980). Lerner also suggested that these beliefs are somewhat inevitable and natural in society. He spoke of belief in a just world as a social phenomenon that society devised as a means of making attributions and as inextricably bound to people's goals in life (Lerner, 1980). He posited that not only is the assumption that the world is fair and just a functional assumption, but it is also a necessary one: "People want to and have to believe that they live in a just world so that they can go about their daily lives with a sense of trust, hope, and confidence in their future" (Lerner, 1980, p. 14).

The theory of a just world was in many ways an extension of Festinger's (1957) work on cognitive dissonance, which suggests that when individuals are confronted with evidence discrepant with prior held beliefs, a state of dissonance or conflict is created (Lerner, 1980). Thus when confronted with evidence that the world is not just, individuals are forced to either accept the lack of justice and unpredictability in the world, or reinterpret events in order to maintain this

just world belief (Lerner, 1980). Individuals may infer that someone of certain circumstances come upon that situation through acts for which they are personally responsible. It is important to note that just world beliefs are social constructions and can be influenced by cultural norms, status, and political events (Lerner, 1980). Such worldviews are passed on through cultural morals and beliefs. For example, in the Western society, children are taught stories in which good triumphs over evil, hard work and dedication prevails over laziness, villains are punished for their actions and heroes are praised, and that individuals are the masters of their own fate. Status and political events are often important factors as well, and individuals from different marginalized groups are typically seen as more deserving of injustice and assigned more blame. This can be seen in political legislation which further marginalizes groups, and who are then blamed for their struggles. Thus, it follows for people to believe that they are responsible for the choices made and deserve the consequences received as a result.

Individuals may act to defend just world beliefs by reinterpreting the outcome of a traumatic event in a more positive light, reinterpreting the cause so as to blame the victim, or reinterpreting the character of the victim (Lerner, 1980). The first component is of particular interest to the current investigation, as one aim of the current study is to examine the manner in which just world beliefs influence coping/appraisal and subsequently lead to posttraumatic growth after a sexual assault. The last two components can be seen in many aspects of society and history, where larger majority populations label a minority group with negative qualities, and as thus deserving of suffering (Lerner, 1980). For example, someone from an upper/middle class background may assume that a homeless individual became homeless because of fiscal irresponsibility, rather than a result of systemic injustice or some other misfortune outside of his/her own control. In addition, this is apparent in the blame and responsibility that is often

associated with rape victims (Lerner, 1980). A belief in a just world perspective can greatly affect how people attribute blame to survivor, as well as how a survivor may come to interpret her sexual assault experience. Thus, a belief in a just world may have very different outcomes based upon who is making the attributions and how they are being made.

Janoff-Bulman (1992) developed the assumptive-world theory based off Lerner's (1980) belief in a just world theory. While maintaining the same underlying principles, she also further developed the theory and specifies three fundamental assumptions which individuals hold about themselves and the world around them. There three fundamental assumptions are: benevolence of the world, meaningfulness of the world, and the self as worthy (Janoff-Bulman, 1992). Benevolence of the world refers to our underlying assumption that the world and the people in it are ultimately good. People need to believe that the world is ultimately good in order to maintain a sense of hope and safety in life (Janoff-Bulman, 1992). Meaningfulness of the world refers to the belief that the world, our lives, and actions are meaningful. What we do has significance and consequences, and things happen for a reason. This is relevant when individuals interpret events, and refers to the degree of randomness and distribution of good and bad fortune. Lastly, the self as worthy is an important aspect which allows one to feel worthy of good fortune, significant, and deserving of good things. Janoff-Bulman's (1992) theory is important in that it further explicates how individuals may strive to maintain and restore their world assumptions (such as "the world is just"), and also the possible consequences of those processes and assumptions.

According to (Janoff-Bulman, 2006), these fundamental beliefs are necessary to most individual's well-being. Traumatic events often times violate these assumptions, and thus cause significant distress or dissonance, after which individuals may try to reconcile their assumptions with their experiences. For example, when an individual is raped, the assumption that "people

are inherently good" or "the world is a good place" may be shattered, and the survivor is challenged to reconcile these assumptions with reality. The "world as meaningful assumption" is related to just world beliefs in that it refers to the "distribution" of events, and why certain things happen to certain people, both good and bad. A meaningful world is one that "makes sense", and where people believe that individuals get what they deserve, that they are in control of what happens to them, and that the world is just. Bad things (and good) are meaningfully distributed, and do not just happen randomly (Janoff-Bulman, 1992, 2006; Sarid, 1996). Thus, when an event occurs that is seemingly in conflict with this belief, the survivor is forced to make sense of what has happened in order to restore the assumption of the world as meaningful. This is particularly relevant when examining survivors' assumptions of self as worthy. This assumption revolves around the belief that one is deserving of good fortune, so sexual assault survivors often question their assumptions of self as worthy after their trauma, as it obviously violates this belief (Janoff-Bulman, 1992, 2006).

Belief in Immanent and Ultimate Justice

The theory of the just world and just world assumptions are also tied to the concepts of immanent and ultimate justice as originally conceptualized by Piaget in 1932 (Furnham, 2003; Lerner, 1980; Maes, 1998a, 1998b; Maes & Schmitt, 1999). Immanent justice refers to the tendency to see justice in events that have recently occurred (Maes, 1998a, 1998b). An example of immanent justice would be receiving a speeding ticket for going too fast. It implies swift and direct consequences to one's actions. It embodies the more typical view of belief in a just world by implying that people receive/deserve misfortune because of bad deeds, or "get what they deserve." On the other hand, ultimate justice refers to a larger timeframe (Maes, 1998a, 1998b). It refers to the belief that those who withstand injustices will be eventually repaid, and those who

commit injustices will eventually be punished. The concept of ultimate justice has its roots in many Eastern and Western religious and spiritual doctrines. In Judeo-Christian religions, God will reward the righteous and those who have suffered with the gift of Heaven; though individuals may have suffered injustices on earth, their faith will be repaid with eternal happiness. Those who sinned and committed evil will be ultimately punished with eternal damnation, even if they do not receive punishment on earth. Similarly, in Buddhist and Hindu religions, the concept of reincarnation and Karma relates to ultimate justice. Good deeds will be eventually rewarded, and bad deeds will be eventually punished. There is a balance to the world, a yin and yang, and those who suffer now will be rewarded later (Lerner, 1980; Maes, 1998b). In support of this theorization, research has found correlations between just world beliefs and self-reported levels of religiosity, with those reporting a higher belief in a just world also expressing stronger religious beliefs (Maes, 1998a). This is not surprising given that many just world beliefs have connections with the roots of western religions.

The concept of ultimate justice is extremely important to sexual assault survivors, as many do not receive the kind of legal or social justice they may have hoped for. Victims may be comforted by the idea that their perpetrators will "ultimately get what they deserve," even if it is not an immediate punishment. Belief in an ultimate justice allows the victim to withstand current injustices because they believe that in the end, it will be made right. This belief also allows victims to preserve just world beliefs and believe that their current circumstance is only a temporary injustice (Lerner, 1980; Maes, 1998b; Maes & Schmitt, 1999). Thus, ultimate justice beliefs are very relevant to meaning making and posttraumatic growth, especially for those who endorse religious/spiritual beliefs, in that those who believe their trauma will be reconciled in the end may be able to make more meaning from the event and reappraise it in a more positive way.

Belief in a Just World, Posttraumatic Growth, Adjustment, and Attributions

Belief in a just world has been cited as an important personal resource for trauma survivors for the following four reasons (Dalbert, 1998). First, belief in a just world affects how individuals perceive justice in their own life and function in daily tasks. Individuals tend to perceive more justice in their own group than in others, and have a need to continue to expect justice throughout the course of their lives. Second, belief in a just world promotes social fairness in interactions (e.g., people want to do the "right thing" because they believe they will be rewarded later). Third, people need to believe in a stable and fair world to cope with daily events. Fourth, belief in a just world promotes physical and mental well-being after a traumatic event. Thus, belief in a just world allows survivors to positively cope with their trauma and achieve higher levels of well-being.

Just world assumptions have typically been studied by examining the manner in which blame is attributed to victims of crimes, natural disasters, or other unfortunate circumstances such as illness, cancer, loss of a child, or accidents (Furnham, 2003). However, the relationship between belief in a just world and posttraumatic growth from the sexual assault survivors' perspectives has received much less attention in the literature, and there have been conflicting findings. On the one hand, a wealth of research shows that holding just world beliefs is associated with increased levels of posttraumatic growth, coping, and other positive outcome measures after traumas such as sexual assault, severe illness, and death of a loved one (Furnham, 2003). Belief in a just world has also been found to be predictive of positive health behaviors and outcomes, and reduced stress (Lucas, Alexander, Firestone, & Lebreton, 2008). Research shows that the more one believes in a just world, the fewer causal self-attributions and lower stress she/he would report; this in turn promotes regaining of control, as individuals who are able to

make situational (versus self) attributions tend to feel more in control of their circumstances (Dalbert, 1998; Furnham, 2003; Lucas et al., 2008). Though belief in a just world does not directly relate to well-being, it does directly influence how one copes, or reacts, to circumstances. As a result, individuals who had high just world beliefs, tended to ruminate less, have fewer depressive symptoms, and report higher levels of well-being (Dalbert, 1998).

However, on the other hand, prior research shows that observers who have strong beliefs in a just world may attribute blame to victims (Furnham & Boston, 1996; Murray et al., 2005). Hence, a strong belief in a just world may not be helpful for a survivor's recovery when utilized by others in responding to the victim because of the blame attributed to him or her. Abbey (1987) also found that sexual assault survivors who hold just world beliefs tend to attribute more blame and responsibility to themselves for their assault, though this seemingly contradictory finding may be the result of a lack of differentiation between (a) characterological and behavioral/external blame, and (b) beliefs in immanent and ultimate justice.

A study conducted by Fetchenhauer, Jacobs, and Belschak (2005) illustrates the varying impact of different types of blame on sexual assault survivors' adjustment outcomes. Attribution styles reflect deeply held beliefs that individuals endorse about the world and hold regarding their own experiences, and can be generalized into three basic categories. With characterological self-blame, the survivor attributes blame for the assault to their own personal characteristics; behavioral self-blame involves blaming the cause of the rape on specific actions taken; and situational or external blame involves attributing the cause of the rape to uncontrollable environmental factors (Fetchenhauer et al., 2005). Fetchenhauer and colleagues (2005) found that there was a significant and positive relationship between victims' belief in a just world, and their ability to adjust and deal with their sexual victimization in general. Adjustment was

measured in terms of how often survivors still thought about the event, and how much it continued to affect them; it was not influenced by time since or age at which they were assaulted. Further, the relationship between belief in a just world and adjustment was mediated by the types of attributions (blame) made. Characterological self-blame has generally been shown to be the most maladaptive attribution style as it involves blaming uncontrollable and unchangeable aspects of oneself for the sexual assault (e.g., "I am the type of person who gets raped") (Fetchenhauer et al., 2005). Behavioral and external attributions, however, have been found to be more adaptive in comparison and result in better well-being as the survivor is able to maintain just world beliefs. Victims who reported higher levels of belief in a just world reported making more situational, behavioral, or external attributions (e.g., "I was in the wrong place at the wrong time, and it would have happened to anyone in the same situation"), which in turn were associated with higher levels of adjustment. By blaming the victimization on a concrete behavioral or external source, blame is somewhat absolved from the victim, and even offers a sense of control because the survivor can avoid similar situations or circumstances in the future (Fetchenhauer, 2005; Janoff-Bulman, 2006). It is important to note that blaming a survivor's rape on behavior sources would not be a positive method of helping survivors if utilized by counselors or other persons in the survivor's life. It is merely a cognitive strategy utilized by some survivors to put distance between themselves and the trauma, absolve characterological blame from themselves, maintain a sense of control, and restore just world beliefs. The belief that the assault occurred without reason or provocation can be more unsettling than if the survivor believes there was a reason, as this can lead to increased perceptions of unpredictability and fear of reoccurrence of the assault (Abbey, 1987).

However, findings on the benefits of different attribution styles are mixed. In a longitudinal study of 59 rape survivors, Koss and Figueredo (2004) found that characterological and behavioral self-blame were both unhelpful to the recovery process, and recovery seemed to best progress when preoccupation with attributing any form of blame was reduced (Koss & Figueredo, 2004). In this study, attribution style, or what the cause of the rape is attributed to, was directly related to reported levels of distress (Koss & Figueredo, 2004). Findings from this study also suggest that characterological self-blame sets the initial stage for psychological distress after the assault, but reduction in behavioral self-blame is the impetus for continued recovery. Characterological self-blame is influenced by personal and environment variables such as prior trauma history, personality characteristics (openness to experience), psychopathology, assault severity, and social cognitions such as just world beliefs, and was directly related to the formation of maladaptive beliefs about self and levels of distress (Koss & Figueredo, 2004). Those who experienced multiple traumas, were less open to experience, and had more severe pathology were more likely to engage in characterological self-blame (Koss & Figueredo, 2004). In fact, maladaptive beliefs (which include deeply help assumptions about self and others such as trust, intimacy, safety, and the justice of the world) have been shown to mediate the relationship between causal attributions made (characterological) and distress (Koss & Figueredo, 2004). Thus, maladaptive beliefs explained the path through which individuals who blamed their character experienced distress, with characterological self-blame resulting in increased maladaptive beliefs, which then led to more emotional distress. These findings are consistent with the Schaefer and Moos (1998) model of posttraumatic growth which claims that person, environment, crisis, and appraisal/coping all influence outcomes of posttraumatic growth.

Another possible explanation for the mixed research findings concerning sexual assault survivors' adjustment in terms of just world beliefs may be related to the concepts of immanent and ultimate justice. Because these two concepts measure very different constructs within a belief in a just world, the results from prior research which did not differentiate these two concepts may have been inadvertently skewed, resulting in conflicting findings. In a factor analysis of 326 cancer patients, Maes (1998b) found that immanent and ultimate justice were quite differentiated on a number of variables (Furnham, 2003). Evaluation of ascription of victim responsibility were much higher for immanent than ultimate justice. Those who had stronger immanent justice beliefs were more likely to accuse and blame the victim, whereas stronger ultimate justice beliefs were associated with more positive impressions of the victim, increased optimism and confidence in coping, greater ability to make meaning of the illness, and lower victim responsibility (Maes, 1998b). However, past research has not examined the relationships among immanent and ultimate justice, coping/appraisal, and subsequent outcomes of growth from the sexual assault survivor's perspective.

Summary and Critique

In summary, belief in a just world theory was originally developed by Lerner (1980) and describes a manner in which people interpret events in the world. This theory was used to inform Janoff-Bulman's (1992) assumptive world theory in which she described three fundamental assumptions: belief in the benevolence of the world, the meaning of the world, and the self as worthy. Janoff-Bulman's theory helps to explain the manner in which survivors of trauma come to appraise their trauma, maintain their beliefs about the world, and find purpose in their trauma. Research findings about the effectiveness of holding just world beliefs have been conflicting for survivors of sexual trauma due to a lack of differentiation between (a) characterological and

behavioral/external blame, and (b) beliefs in immanent and ultimate justice (Abbey, 1987; Fetchenhauer et al., 2005; Furnham, 2003; Maes, 1998). By accounting for differences in immanent and ultimate justice, I hope to clarify the inconsistent findings concerning the effects of survivors' just world beliefs on posttraumatic growth.

Coping and Appraisals of Meaning

Schaefer and Moos (1998) discussed the importance of coping and appraisal in their model of posttraumatic growth. They postulated that personal system (such as belief in ultimate justice) may influence one's ways of coping with (e.g., approach vs. avoidance coping) and appraisal of the traumatic incident(s), which subsequently may affect one's levels of posttraumatic growth. Coping is defined as "cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Folkman & Lazarus, 1991), whereas appraisal can be defined as "the process of categorizing an encounter, and its various facets, with respect to its significance for well-being.… It is largely evaluative, focused on meaning or significance" (Lazarus & Folkman, 1984, p.31). In addition, appraisal is influenced by personal and environmental variables such as resources for coping, and beliefs about self and the world (Folkman & Lazarus, 1991). In other words, how individuals "cope" includes their thoughts and actions taken to deal with the stresses of a specific event and their ways of appraising the meaning of the event.

Much research has been dedicated to learning how survivors of sexual assault utilize various coping strategies, and examining how different methods of coping may be more or less effective for survivors in achieving healing and posttraumatic growth from the trauma (Bell, 1999; Burt & Katz, 1988; Frazier & Burnett, 1994; Littleton & Breitkopf, 2006; Morris, Shakespeare-Finch, & Scott, 2007). In fact, coping has been cited as one of the primary causes of

posttraumatic growth (Frazier et al., 2004). However, the research findings on the influence of coping on posttraumatic growth have been mixed, partly as a result of a lack of consistent definitions of various types of coping. For the purpose of this study, I focus on the constructs of coping/appraisal as part of the model of posttraumatic growth conceptualized by Schaefer and Moos (1998). Specifically, three types of coping methods—problem solving, spiritual coping, and meaning making—were emphasized in the current study. It is important to note that according to the Schaefer & Moos (1998) model, seeking social support is also considered an important coping strategy (Prati & Pietrantoni, 2009; Schaefer & Moos, 1998). However, it is not examined in the present study because the current investigation focuses on coping mechanisms that are mostly within the survivor's control. Coping through problem-solving, spirituality, and meaning making are processes that occur internally and the outcome of such coping strategies does not largely depend upon others' reactions as does coping through seeking social support.

Approach Coping /Problem Solving

Schaefer and Moos (1998) described approach coping as allowing survivors to engage in problem solving strategies. Problem solving strategies involve actively addressing, appraising, or confronting the trauma and/or its resulting sequelae (Heppner & Baker, 1997; Schaefer & Moos, 1998). Similarly, Folkman & Moskowitz (2000) defined problem-focused coping (problem solving) as "thoughts and instrumental behaviors that solve or manage the underlying cause of distress" (p.2).[1] To the contrary, those who utilize avoidance coping strategies do not directly address the trauma; instead, they may deny or actively avoid thinking about or dealing with the event and its resulting sequelae (Heppner & Baker, 1997). Avoidance coping can lead survivors

[1] For the purpose of the current study, approach coping, problem-solving coping, and problem-focused coping will be used synonymously because these terms have had similar and overlapping definitions in the literature.

to minimize their trauma and come to the conclusion that nothing can be done (Schaefer & Moos, 1998). This may include activities such as emotional numbing, substance abuse to block out memories of the trauma, and avoiding thoughts or places that remind the survivor of the sexual assault (Heppner & Baker, 1997; Littleton & Breitkopf, 2006).

Approach coping/problem solving strategies have been found to positively predict posttraumatic growth in sexual assault and other trauma survivors, whereas avoidance coping is negatively related to posttraumatic growth (Frazier et al., 2004; Frazier & Berman, 2008; Littleton & Breitkopf, 2006; Schaefer & Moos, 1998). Often, those who feel confident in their coping resources are more likely to utilize approach coping, whereas avoidance coping is used more often when survivors feel that they have inadequate coping resources (Littleton & Breitkopf, 2006). For example, those who have increased social support are more likely to utilize approach coping and religious or spiritual coping, use less avoidance coping and self-blame, and report more positive life changes over time (Frazier et al., 2004). Also, survivors who reported self-blame and low opinions of self-worth reported an increased reliance on avoidance coping strategies, though positive social support seemed to buffer this effect (Littleton & Breitkopf, 2006). Bell (1999) found that problem-focused coping strategies were effective for rape survivors and that in comparison, avoidance coping strategies such as withdrawal, isolation, and denial were less effective with helping survivors to heal. The use of avoidance coping tactics were associated with less posttraumatic growth and meaning making, and exacerbated posttraumatic stress symptoms (Boeschen, Koss, Figueredo, & Coan, 2001). Some studies on the resolution and meaning making of childhood sexual abuse have found that actively avoiding the assault has a strong inhibitory effect on healing (Wright et al., 2007). Use of avoidance coping is common immediately after the occurrence of sexual abuse, but continued use of avoidance can

lead to harmful and maladaptive coping, and can inhibit posttraumatic growth (Wang & Heppner, 2011).

In sum, past research has suggested that problem solving strategies generally positively predict posttraumatic growth in sexual assault survivors (Frazier et al., 2004; Frazier & Berman, 2008; Littleton & Breitkopf, 2006; Schaefer & Moos, 1998). Also, as discussed earlier, holding just world beliefs (particularly beliefs in ultimate justice) is associated with increased use of active coping (Dalbert, 1998; Fetchenhauer, 2005; Furnham, 2003; Furnham & Boston, 1996; Lucas et al., 2008) or higher levels of confidence in one's coping ability (Maes, 1998b). Therefore, the current study examines how this coping strategy may mediate the relationship between belief in ultimate justice and posttraumatic growth. Next, the other two important coping strategies–spiritual coping and meaning making-are presented.

Religious and Spiritual Coping

Religious and spiritual coping have been found to be very helpful in coping with trauma, including sexual assault. Definitions of religiosity/spirituality and religious/spiritual coping have varied greatly between studies, but there are some prominent differences between religiosity and spirituality that are important to note. Religiosity is defined by Pargament and Mahoney (2009) as adherence to a classical institutional domain and organized belief system; it includes both personal affiliation and endorsement of beliefs, as well as activities related to that belief system. On the other hand, Pargament and Mahoney (2009) defined spirituality broadly as the essence of religion, and is a less tangible construct than religion in some senses, as it refers to deeply held concepts such as the divine and transcendent reality. Spirituality can be held independently of religion (Pargament & Mahoney, 2009), though religion and spirituality can be expressed simultaneously, and both privately and socially. For the current study, the broad definition of

spirituality used by Madsen and Abell (2010) was utilized, who described it as "deeply personal beliefs and practices that transcend the regular activities of this world" (p. 225).

Spiritual coping generally refers to the process and actions of relying on one's spiritual resources to deal with a stressor (Madsen & Abell, 2010; Pargament & Mahoney, 2009). This may include activities such as attending church and religious events, but also may include feeling more spiritually connected to a divine power or others, praying, or simply feeling comforted by knowing that a divine being is "out there" (Pargament & Mahoney, 2009). It is also important to differentiate spiritual coping from an increased sense of spirituality often reported with posttraumatic growth. Spiritual coping refers to an active search process of seeking out and engaging in spiritually related activities in order to cope with a stressor (Madsen & Abell, 2010; Pargament & Mahoney, 2009). On the other hand, spirituality in terms of posttraumatic growth refers simply to a greater reliance on spirituality than prior to the assault (Tedeschi & Calhoun, 1996; Tedeschi et al., 1998). Thus, spiritual coping is a means of dealing with a specific stressor, whereas increased spirituality in posttraumatic growth refers to a change in one's philosophy of life (Tedeschi & Calhoun, 1996; Tedeschi et al., 1998).

A sense of spirituality seems to allow survivors to be better able to make meaning from their trauma, (Frazier et al., 2004; Prati & Pietrantoni, 2009; Tedeschi & Calhoun, 1996), though there have been few studies examining the relationship between spiritual coping and sexual assault survivors' posttraumatic growth (Ahrens, Abeling, Ahmad, & Hinman, 2010). Some survivors of sexual assault reported that their trauma has harmed their sense of spirituality, whereas others reported that reliance on their spirituality has been helpful in coping and growing from the assault (Ahrens et al., 2010). This discrepancy seems in part related to whether positive or negative spiritual coping strategies were used, and pre-existing religious affiliations.

In a study of 70 sexual assault survivors (Ahrens et al., 2010), 60% reported an increased role of religion/spirituality[2] in their lives after the sexual assault. Religious and spiritual coping is most likely to be used by those who already describe themselves as religious (Ahrens et al., 2010; Park, 2005). Pargament, Tarakeshwar, Ellison, and Wulff (2001, as cited in Ahrens et al., 2010, p.4) defined negative religious/spiritual coping as "involving religious struggle and disconnection. Such struggles may occur when negative life events lead individuals to question the existence and benevolence of God". Negative religious coping has been associated with significantly higher levels of distress, depression, and posttraumatic stress symptoms, whereas positive religious coping is predictive of increased posttraumatic growth, well-being, life satisfaction, and adjustment (Ahrens et al., 2010).

However, overall, survivors with increased spirituality reported a restored sense of well-being, while those without increased spirituality remained depressed (Kennedy, Davis, & Taylor, 1998). In addition, religious coping can significantly influence appraisals and reframing of meaning in events, and can lead to better adjustment and opportunities for personal growth (Frazier et al., 2004; Pargament & Mahoney, 2009; Prati & Pietrantoni, 2009). In fact, significant positive associations were found between religiousness, meaning making, subjective well-being, and posttraumatic growth among college students who reported having recently (M = 5.8 months) lost a significant other (Park, 2005). Using one's religion/spirituality as a meaning framework to reinterpret an event is quite common, and can be very adaptive in restoring global meaning systems and just world beliefs (Ahrens et al., 2010; Park, 2005). For example, many

[2] Religion and spirituality have also been used interchangeable in the research. For example, items concerning religion may be represented when asking about spirituality, and vice versa. Consequently, in this paper, research concerning spirituality and religiousness will often be referred to together, as these constructs are not always differentiated in the literature.

trauma victims, including sexual assault survivors, reinterpret an event as "part of God's plan" in order to find meaning and positive aspects in a terrible event (Ahrens et al., 2010; Park, 2005).

For the current investigation, spiritual coping was examined because preliminary studies suggest the positive association between spiritual coping and posttraumatic growth (e.g., Frazier et al., 2004). Also, survivors of trauma may use one's spirituality to restore their just world beliefs (Ahrens et al., 2010; Park, 2005). Hence, the current study examines whether spiritual coping mediates the relationship between beliefs in just world and posttraumatic growth.

Meaning Making

Meaning has been a growing area of research for survivors of traumatic events, but has generally been lacking for sexual assault survivors (Cromer & Smyth, 2010; Lindner, 2010; McElroy, 2010; Park, 2008, 2010; Park & Ai, 2006; Pipinelli & Kalayjian, 2010; Wright et al., 2007). As described previously, traumatic events often shatter just world assumptions, and individuals will attempt to make sense of events that do not fit their life and world assumptions. As a result, survivors of traumatic events are motivated to find meaning and order in those things that seem meaningless by restoring world assumptions (Davis et al., 2007; Janoff-Bulman, 2006).

Viktor E. Frankl (2006) is considered by many as the progenitor of the meaning literature. He discussed the need human beings have to find significance and meaning in distressing events and in their lives. He suggested that there is an instinctual drive and *will* to find meaning (Frankl, 2006). Through his own experiences living in a concentration camp, Frankl describes the manners in which human beings search for meaning in their life experiences even in the face of great suffering. Frankl (2006) stated "In some way, suffering ceases to be suffering at the moment it finds a meaning… But let me make it perfectly clear that in no way is

suffering necessary to find meaning. I only insist that meaning is possible even in spite of suffering…" (p.113). In this way, Frankl (2006) was trying to convey that by finding meaning in suffering, one is able to overcome that experience to some degree. Hence, survivors who are able to find meaning from their trauma may be more likely to achieve posttraumatic growth.

Park (2010) proposed an integrative model of the meaning making process in response to traumatic events. This model was developed from theories of many prominent meaning researchers in the field who emphasize differing aspects of meaning making (Davis, Wortman, Lehman, & Silver, 2000; Janoff-Bulman, 1992; Joseph & Linley, 2008). According to Park's model (2010), people have a global meaning system with which they interpret events and experiences in their life and in the world. When experiencing a stressful event that may challenge that meaning system, meaning is assigned to that event. Distress is caused by a discrepancy in the meaning of the event and the global system, and how distressful the event is perceived to be depends on the degree to which the meaning of the event challenges the global meaning system. Because of the distress resulting from this discrepancy and through meaning making attempts, individuals' efforts to resolve the two, which, if successful, may result in greater adjustment with regards to the event (Park, 2010).

Thompson (1985) described five ways in which trauma survivors (including sexual assault survivors) find meaning in their trauma as a means to cope. The first is finding sideline benefits, which essentially means focusing on the positive and seeing the silver lining of things. By focusing on the benefits that have come out of the traumatic experience, one is better able to see the meaning that event had. The second is comparing oneself to others in worse situations. While this may seem somewhat calloused, by comparing oneself to others who are worse off, the trauma survivor can build confidence in his or her coping skills and continue to see the positive.

The third way is by imagining that the event could have been worse. While it is generally not helpful for survivors to ruminate on what happened, imagining that the trauma could have been worse allows the survivor to feel spared in some sense. The fourth way is forgetting the negative aspects of the trauma. While it is impossible, barring unusual circumstances, to simply forget the negative aspects of the trauma, survivors can find some meaning in the event by distancing themselves, putting it behind them, and not dwelling on the negative aspects but instead focusing on the positive aspects. Fifth, redefining one's goals after the trauma can be helpful in finding meaning. By reevaluating one's life goals and making new goals, one is able to cope with the stressful event in a more positive way (Thompson, 1985).

It is important to distinguish between global and situational meaning. Global meaning refers to an individual's overall beliefs and feelings about self, the world, goals, and justice, whereas situation meaning refers to the meaning and feeling one attributes to a particular context (Park, 2010). The meaning making process often calls for individuals to reevaluate their situation, goals, and beliefs in order to integrate their belief and appraised meanings of the event into their global belief and meaning system (Park & Ai, 2006). Thus, this process requires individuals to make efforts to understand how their traumatic event fits in with their overall schema about life and the world, and work to reduce the discrepancy between their shattered beliefs and their ideal world (Park, Edmondson, Fenster, & Blank, 2008). When survivors attempt to reestablish their shattered beliefs about the justice of the world, they must work to make sense and find meaning in their trauma. As a result, the search for meaning and finding meaning in the event is an important part of maintaining just world beliefs and achieving positive life changes after the trauma (Davis et al., 2007).

Park and colleagues (2008) examined the previously described model of meaning making and found that meaning making was related to psychological well-being and posttraumatic growth in a one-year longitudinal study of 172 cancer survivors. Meaning making (as assessed through open-ended qualitative questions) was associated with improved growth, well-being, and life meaningfulness (Park et al., 2008). In addition, it seems that through the relationship between meaning making and growth, just-world beliefs are also restored, perhaps because as one "makes sense" of the trauma, the world is perceived as more ordered and controlled. This is consistent with Janoff-Bulman's (1992) research finding that after just world assumptions are shattered, survivors attempt to reconcile these beliefs through finding meaning in the experience.

Others have also examined meaning making as a coping strategy for survivors of traumatic events (Frazier & Burnett, 1994) and assessed the process through which survivors search for meaning. The search for meaning often involves the use of approach coping strategies, which are also associated with increased posttraumatic growth. Some have suggested that the meaning making or appraisal process is an essential aspect required for one to achieve posttraumatic growth (Davis et al., 2007). In an attempt to make sense of a seemingly meaningless and unjust event, such as sexual assault, survivors perhaps utilize more approach coping and ascribe more meaning to their trauma in order to regain their belief that the world is a safe and just place (Frazier & Burnett, 1994). In a study of 60 adult survivors of childhood sexual abuse, Wright and colleagues (2007) found approximately half were able to find meaning and make sense of their traumas. Those who did report being able to find meaning suggested that they were able to find strength through suffering, and because of their trauma and in their search for meaning, they were able to examine themselves and their own self-worth through coping.

Many who found meaning also reported improved relationships, increased spirituality, improved coping skills, improved parenting skills, and personal growth (Wright et al., 2007).

In sum, meaning making is conceptualized as the appraisal/reappraisal process that may result in posttraumatic growth (Park et al., 2008). In order to restore the belief that the world is a safe and just place, sexual assault survivors may try to make sense of their traumatic experience by searching for meaning (Frazier & Burnett, 1994), and meaning making has been found to be associated with higher levels of posttraumatic growth (Wright et al., 2007). Therefore, meaning making is examined as a potential mediator in the relation between just world beliefs and posttraumatic growth. Because there is relatively little research and few measures regarding meaning making, this variable is assessed through self-reported search for meaning.

Summary and Critique

Research on coping has adequately demonstrated how trauma survivors utilize various coping strategies to deal with their trauma, and approach coping/problem solving, spiritual coping, and meaning making have been found to positively predict posttraumatic growth in sexual assault survivors (Bell, 1999; Frazier et al., 2004; Frazier & Berman, 2008; Prati & Pietrantoni, 2009; Tedeschi & Calhoun, 2006), although a meta-analysis study of posttraumatic growth and coping found that spiritual coping and positive reappraisals were the most significant predictors of growth (Prati & Pietrantoni, 2009). Further, holding just world beliefs is associated with increased levels of active coping (Dalbert, 1998; Fetchenhauer, 2005; Furnham, 2003; Furnham & Boston, 1996; Lucas et al., 2008), and sexual assault survivors may use their spirituality or search for meanings in order to restore their just world beliefs (Ahrens et al., 2010; Frazier & Burnett, 1994; Park, 2005). However, little is known about how these strategies of coping mediate the relationship between just world beliefs and posttraumatic growth. Therefore,

the current study aims to examine the potential mediating roles of these coping mechanisms in the relationship between just world beliefs and posttraumatic growth among sexual assault survivors.

Summary and Need for Current Study

As can be seen from the review of the above literature, there is a discernible relationship between posttraumatic growth, belief in a just world, coping, and meaning making in the lives of sexual assault survivors. Moreover, consistent with the Schaefer and Moos' (1992, 1998) model of posttraumatic growth, preliminary research supports the theory that coping and appraisal of the trauma (all parts of S-IV) mediate the relationship between personal and environmental resources (S-I and S-II) and outcomes of posttraumatic growth (S-V) (Frazier et al., 2004). Specifically, Frazier and colleagues (2004) found that approach and religious coping, positive appraisals, control over the recovery process, and social support mediated the relationship between personality characteristics (such as extraversion and neuroticism) and posttraumatic growth. However, Frazier et al. (2004) did not address belief in a just world or meaning making in their research, which the current study examines. Research shows that just world beliefs, coping, and meaning making have significant influences on posttraumatic growth (Furnham, 2003; Folkman & Lazarus, 1991; Park et al., 2008), but that the processes in which these constructs operate, and their relationship to each other, have yet to be fully explored. In particular, researchers have called for additional studies to delineate the path to posttraumatic growth (Frazier & Berman, 2008). Many studies have demonstrated the correlates of posttraumatic growth (Fetchenhauer et al., 2005; Folkman, 2000; Kennedy et al., 1998; Park & Ai, 2006; Prati & Pietrantoni, 2009), yet more research is still needed in order to explain how or why these relationships occur.

While there is substantial research on meaning, coping, belief in a just world, and posttraumatic growth of sexual assault survivors, there is a dearth of research that addresses all of these variables. To my knowledge, no past studies have addressed all of these variables in a single study. The previous research has seemingly been limited to investigation of only one or two of these constructs, or has been conducted with populations other than sexual assault survivors. In addition, in the previous sexual assault research, distinctions were not made between the immanent and ultimate justice aspects of just world beliefs, and such beliefs have not been examined in relation to problem solving, spiritual coping, and meaning making, and their effects on posttraumatic growth. In this way, the current study adds to the literature by providing an investigation which examines the path through which belief in ultimate just leads to posttraumatic growth for sexual assault survivors. In addition, the current study also aims to test Schaefer and Moos' (1998) model of posttraumatic growth by confirming the roles of personal worldviews and coping/appraisal in trauma survivors' posttraumatic growth. Thus, the proposed study holds potentially important implications for research in the field, but there are also profound clinical applications. Findings may demonstrate the importance of bolstering coping and meaning making strategies rather than simply reducing negative symptoms, and may possibly contribute to interventions and knowledge that may help survivors achieve posttraumatic growth after a sexual assault.

Based on Schaefer and Moos' model (1998) and the findings of the empirical studies I summarized above, I generated the following three hypotheses.

Hypothesis 1: Beliefs in ultimate justice would be positively correlated with levels of posttraumatic growth.

Hypothesis 2: Use of problem solving, spiritual coping, and meaning making strategies would be positively correlated with levels of posttraumatic growth.

Hypothesis 3: Problem solving, spiritual coping, and meaning making would partially mediate the relationship between beliefs in ultimate justice and posttraumatic growth. This suggests that higher levels of beliefs in ultimate justice among sexual assault survivors would lead to more use of problem solving, spiritual coping, and meaning making strategies, which in turn would result in higher levels of posttraumatic growth.

CHAPTER 3

METHOD

Design

In the present study, I used a cross-sectional design to examine the variables of belief in ultimate justice, problem-solving, spiritual coping, meaning making, and posttraumatic growth through an online survey. The predictor variable was belief in ultimate justice; the criterion variable was posttraumatic growth; and the mediating variables were problem-solving, spiritual coping, and meaning making. Participants completed the Revised Sexual Experiences Survey Short Version (Koss et al., 2007) to assess eligibility for the study, and then the previous variables were assessed by the following instruments: Emotion Thermometer (Mitchell, 2001); Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996); Belief in a Just World Scale (Maes, 1998b); the Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2006); and Trauma Resilience Scale (Madsen & Abell, 2010), in this order. In addition, participants were given the opportunity at the end of the survey to provide qualitative feedback about their experiences of the study.

Participants

Requirements for participation in the study were (a) identifying as female, (b) being at least 18 years old, and (c) disclosure of a history of sexual violence after the age of 14 on the Revised Sexual Experiences Survey (Koss et al., 2007). According to Kline (2006), at least 10 participants per parameter are required for a path analysis, which means a minimum of 110 participants were necessary. The current sample included 144 female participants who had a mean age of 29.3 years (SD = 12.0). For a more detailed description of participant's demographic backgrounds, please see Table 1.

In terms of the participants' racial/ethnic backgrounds, 70.1% of the participants identified as White American (*n* = 101), 16% as Black/African American (*n* = 23), 6.9% as Chicano/Hispanic/Latino/a (*n* = 10), 3.5% as Bi-Racial/Multi-Racial (*n* = 5; i.e., Mexican American/Native American, Alaskan Native/White, and Japanese/Native American/White, or choosing biracial but did not specify), 1.4% as Native American (*n* = 2), 1.4% as Other (*n* = 2; i.e., Armenian American and International), and < 1.0% as Asian American/Pacific Islander (*n* = 1). Participants from Illinois made up the largest percent (59%), with participants from twenty-one other states accounting for the remaining 39.6% (one chose not to respond, and another resided in Canada). Approximately 73% come from the Midwest, 10% come from the East Coast or North East, 5% came from the South, and 12% came from the West Coast.

Growing up, 25% of participants were never able to make ends meet, or often unable to make ends meet, whereas 8.3% were sometimes able to make ends meet, and 65.2% were usually or always able to make ends meet. Most of the participants either had completed some college or were currently working on a Bachelor's degree (44.4%). Other participants had received a graduate degree (28.5%) or a Bachelor's degree (22.9%), and 3.5% had received only a high school diploma.

Most participants identified their relationship status as single (41.7%). Others identified as: partnered/cohabitating (27.1%); married (23.6%); and divorced (7.6%). Participants represented a range of sexual orientations; though most of them (64.6%) identified as exclusively heterosexual, 15.3% identified as mostly heterosexual, 7.6% as bi-sexual, 5.6% as mostly homosexual, and 6.9% as exclusively homosexual. The majority of participants identified as Christian (56.2%), and had an average religiosity rating of 3.3 (*SD* = 1.9) and average spirituality rating of 4.7 (*SD* = 1.9) on a 1-7 rating scale (see Table 1 for participants' levels of religiosity

and spirituality and for frequencies of participants' specific religions). Just under half (46.5%) of the participants had received counseling, and 53.5% had not received counseling. Approximately 31.9% (*n* = 46) were recruited from a class or teacher, 32.6% (*n* = 47) from emails/listservs, 20.1% (*n* = 29) from flyers, 11.1% (*n* = 16) from other sources (word of mouth, friends, and Facebook being the most common), and 4.2% (*n* = 6) from a therapist or community agency.

On average, participants experienced their trauma 5.6 years prior to completing the survey. Of the participants, 14.6% (*n* = 21) experienced the trauma in the past year, 13.9% (*n* = 20) had experienced their trauma between 1-3 years prior, 18.1% (*n* = 26) had experienced their trauma between 4-6 years prior, and 24.5% (*n* = 35) experienced their trauma more than 7 years prior. In addition, 52.1% (*n* = 75) of participants reported completed oral rape, 73.6% (*n* = 106) reported completed vaginal rape, and 34% (*n* = 49) reported completed anal rape. Participants also reported attempted oral (61.1%, *n* = 88), vaginal (72.2%, *n* = 104), and anal rape (36.8%, *n* = 53) (see Table 2).

Measures

Demographic Questionnaire

After informed consent was obtained but before the subsequent scales were completed, the participants provided optional demographic information such as age, sex, race/ethnicity, sexual orientation, family socioeconomic backgrounds, educational level, relationship status, religious/spiritual preferences, levels of religiosity and spirituality, prior counseling experiences, and how they heard about the study.

Revised Sexual Experiences Survey—Short Version (Koss et al., 2007)

The scale is a 10-item measure that assesses whether and how many times sexual coercion, attempted rape, and rape have occurred. Participants were asked to report the frequency of a variety of sexual experiences (0, 1, 2, or 3 or more times in the past 12 months; and 0, 1, 2, or 3 or more times since the age of 14), with higher scores reflecting a greater frequency of sexual coercion. Questions are asked in a behavioral framing, so participants' answers are not biased because of certain language. For example, one item asks whether "a man put his penis into your vagina without your consent," rather than asking if the participant was raped. This elicits more accurate responses because many victims do not define their experience as rape, even when it fits the legal definition. This measure has shown adequate test-retest reliability (r = .93) as well as consistency between this scale and other self-reported measures of sexual violence (r = .73) (Koss et al., 2007). This scale has been validated in White Americans, African Americans, adult and adolescent female populations, and is correlated with other measures of sexual coercion such as the Revised Attitudes Towards Sexuality Inventory and the Revised Conflict Tactics Scale (Cecil & Matson, 2006; Koss et al., 2007).

Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996)

Posttraumatic growth was assessed by the PTGI which is a 21-item measure assessing positive change after a trauma with a six-point Likert-type scale (0 = "I did not experience this change as a result of my crisis"; 5 = "I experienced this change to a very great degree as a result of my crisis"). The PTGI has five subscales assessing areas of growth, which include: 5 items measuring New Possibilities (e.g., "I established a new path for my life"), 7 items measuring Relating to Others (e.g., "I have a greater sense of closeness with others"), 4 items measuring Personal Strength (e.g., "I discovered that I'm stronger than I thought I was"), 2 items measuring Spiritual Change (e.g., "I have a stronger religious faith"), and 3 items measuring Appreciation

of Life (e.g., "I have a greater appreciation for the value of my own life"). A mean composite score was created and used for data analyses (as opposed to individual subscales), and has a possible range of 0 to 5, with higher scores reflecting more posttraumatic growth.

In a study with trauma survivors, Shakespeare-Finch and Enders (2008) found that the survivors' self-reported PTGI scores were significantly correlated with the subjective reports of observers. The PTGI was not originally developed for use with sexual assault survivors, but rather with trauma survivors in general (Tedeschi & Calhoun, 1996). However, the PTGI has been used in adult treatment-seeking sexual assault survivors, and the findings suggested midrange growth scores that were comparable to other trauma survivor samples (Grubaugh & Resick, 2007). It has also been validated in a variety of populations, including clinical and non-clinical populations of males and females with varying degrees of trauma severity and experiences, including natural disaster, illness, and interpersonal violence (see Tedeschi & Calhoun, 1996). The PTGI has demonstrated good internal consistency with an overall Cronbach's alpha of .90, and an alpha range of .67-.85 for each subscales (New Possibilities, .84; Relating to Others, .85; Personal Strength, .72; Spiritual Change, .85; and Appreciation of Life, .67) (Tedeschi & Calhoun, 1996). The scale as a whole has a test-retest reliability of .71 over two months; however, the subscales of Personal Strength and Appreciation of Life had a low test-retest reliability of r =.37 and .47, respectively (Joseph & Linley, 2008; Tedeschi & Calhoun, 1996). For the current study, the internal consistency estimate of the total scale is .93. The individual subscales also showed adequate internal consistencies with a range of .74-.87 (New Possibilities, .87; Relating to Others, .86; Personal Strength, .84; Spiritual Change, .74; and Appreciation of Life, .77).

Belief in Immanent and Ultimate Justice Scale (BIUJS; Maes, Schmitt, & Seiler, 1998; Maes & Schmitt, 1999)

Belief in a just world, particularly ultimate justice, was measured by the BIUJS. At this time, there are no measures assessing belief in a just world specifically for sexual assault survivors, and few that have been used in the United States. The original BIUJS contained 19 items and four factors (5 items measuring belief immanent justice, 4 items measure belief ultimate justice, 5 items measuring belief a general just world, and 5 items measuring belief in an unjust world). However, a modified and expanded version of the scale was later developed which eliminated illness-specific language and incorporated additional items from the General Belief in a Just World Scale (Claudia Dalbert, Montada, & Schmitt, 1987); the revised BIUJS was used in the present study (Maes & Schmitt, 1999). The updated scale retained the same four factors as the previous version, but with additional items. It contains 30 items and is rated on a six-point Likert-type scale ranging from 0 ("not at all") to 5 ("completely true"). The four subscales measure the extent to which participants believe in immanent and ultimate justice, as well as the degree to which participants see the world as just or unjust. For the purpose of the current study, only the subscale on ultimate justice was analyzed. A sample item of one of the 13 questions on the ultimate justice subscale is "I am convinced everyone will be compensated for suffered injustice one day". There are also 6 items measuring belief in immanent justice, and 11 questions measuring general just world and unjust world beliefs, which were included in the survey, but not analyzed separately. The modified scale has adequate internal consistency: $\alpha = .72$ for the immanent justice scale, and $\alpha = .90$ for the ultimate justice subscale in a German sample (Maes & Schmitt, 1999). A separate mean subscale score was calculated for beliefs in ultimate justice, and had a possible range between 0-5, with higher scores representing higher beliefs in ultimate

justice. The BIUJS was correlated with other scales on just world beliefs (Dalbert et al., 1987), and associated with beliefs in control, draconian beliefs ("A dispositional proneness to react strictly and rigorously to human faults and weaknesses," (Maes & Schmitt, 1999, p.71)), and beliefs about the distribution of justice.

The BIUJS was originally developed and validated in a German population of cancer patients (Maes, 1992), but has been translated and utilized in a number of countries including Pakistan (Fatima & Suhail, 2010) and France (Bègue, 2002). In Pakistan, the scale was translated into Urdu through forward and backward translation, and was found to maintain its factor structure (Cronbach's alpha of .75 for immanent justice, and .70 for ultimate justice) (Fatima & Suhail, 2010). In France, the BIUJS was translated to French, and exhibited a Cronbach's alpha of .64 and .58 for the immanent and ultimate justice subscales respectively, though this relatively low alpha could be the result of a small and heterogeneous sample. In addition, participants in that study were sampled by approaching individuals randomly in a public location which may have resulted in a lack of consistency in results (Bègue, 2002). However, the BIUJS has not been used in American or other English speaking populations.

Because the BIUJS has not been previously used in English-speaking or American populations, the forward and back-translation procedure was conducted prior to commencement of the study. Beginning with the German version of the scale, a native German speaker who was a graduate student in Psychology and was blind to the purpose of this study translated the measure into English. Subsequently, another native German speaker who currently resides in Germany and was blind to the purpose of this study back-translated the measure from English into German. After both translation processes were complete, a third bilingual individual who is a professor in the Foreign Languages Department at SIUC and who was blind to the purpose of

this study compared the original German version with the back-translated version to ensure cultural and linguistic equivalency and deemed the two versions equivalent. For the current study, the internal consistency estimate of the Ultimate Justice subscale is .93.

Trauma Resilience Scale (TRS; Madsen & Abell, 2010)

Problem solving and spiritual coping were measured by the TRS. This scale was developed rather recently, but shows great promise. It was developed for and validated in a population of 307 sexual assault, sexual abuse, and intimate partner violence survivors. The TRS has 48 items with a seven-point Likert-type scale, ranging from 1 ("Almost Never True of me") to 7 ("Almost Always True of me"). There are four subscales including problem solving, supportive relationships, optimism, and supportive spirituality. The problem solving subscale contains 10 items and measures a survivor's ability of finding creative solutions to problems, set goals, and find needed resources (e.g., "I am able to find and get the services I need to help me with tough situations"). The supportive relationships subscale contains 13 items and measures the survivor's relative level of social support from friends, family, and coworkers (e.g., "I have people in my life who I can talk to about everything"). The optimism subscale contains 12 items and measures survivors' hope and expectation that good things will happen, and current difficulties will be resolved (e.g., "Even though bad things have happened to me, I have peace about my future"). The supportive spirituality subscale contains 13 items and assess the degree to which the survivor uses their spirituality to cope with their trauma (e.g., "My spiritual beliefs help me through difficult times").

Only the subscales of problem solving coping and supportive spirituality were used for analysis. Mean scores were calculated for each subscale with a possible a possible range of 1-7, and higher scores reflecting greater use of problem solving or supportive spirituality. The scale

was validated in both men and women ranging between the ages of 18-70 years old, from a wide variety of ethnic and racial backgrounds, as well as with various types of trauma histories (Madsen & Abell, 2010). The scale as a whole has excellent internal consistency (α = .96). The subscales also have good internal consistency (problem solving: α = .85; supportive relationships: α= .85; optimism: α=.85; and supportive spirituality: α = .98). Madsen and Abell (2010) also reported convergent validity; the TRS was significantly correlated with the Beckham Coping Strategies Scale and the Spirituality and Spiritual Care Rating Scale in the predicted direction. Test-retest reliabilities for this scale are unavailable at this time (Madsen & Abell, 2010). For the current study, the internal consistency estimates are .90 for the TRS-Problem Solving, and .98 for the TRS-Supportive Spirituality.

Emotional Thermometer (ET; Mitchell, 2010)

The ET is a single-item visual analogue assessment tool on an 11-point scale (0 = "No Distress" to 10 = "Extreme Distress") which measures perceived levels of distress, anxiety, depression, and anger within the previous week, as well as subjective perception of needed help. For the purposes of the current study, only scores on the Distress scale were analyzed. Participants indicate their subjective level of distress by marking the appropriate number on an image of a thermometer. Scores ranging from 0-4 indicate generally manageable levels of distress; scores of 5-7 indicate moderate levels of distress which may significantly affect one's life; and scores of 8-10 indicate extreme distress which is may feel unmanageable for which one should seek assistance.

The ET was developed as an extension of the Distress Thermometer (National Comprehensive Cancer Network) for use in medical settings to assess levels of distress in cancer patients (Mitchell, 2007). Though not specifically validated with sexual assault survivors, the ET has been used with multiple types of cancer patients, with both males and females, with individuals

from a variety of different racial and ethnic backgrounds (Mitchell, 2007, 2008, 2010a, 2010b), and in several different countries including Great Britain (Mitchell, 2007) and Australia (Hughes Sargeant, & Hawkes, 2011). It has been shown to be consistent with other measures of emotional distress, such as the Beck Depression Inventory, the Hospital Anxiety and Depression Scale, and the Brief Symptom Inventory, and shows 77% sensitivity for detecting clinically significant distress (Mitchell, 2008; Hughes et al., 2011).

Meanings in Life Questionnaire (MLQ; Steger et al., 2006)

To date, there are no scales that specifically measure global meanings made of a specific traumatic event, or with sexual assault survivors in particular (Park & Ai, 2006). The MLQ is a 10-item measure with a seven-point Likert-type scale (1 = "Absolutely Untrue" to 7 = "Absolutely True") which assesses the degree to which participants are searching for and have found meaning in their lives. It contains two subscales: current Presence of meaning (i.e., individual reports having found an ultimate meaning or purpose in their life, such as "I understand my life's meaning") and current Search for meaning (individual is actively searching for meaning, such as "I am looking for something that makes my life feel meaningful"). For the purpose of this study, the mean Search subscale score was used to assess meaning making coping with a possible range of 1 to 7 (higher scores reflecting greater search for meaning).

The authors of this scale reported that it has good internal consistency on the Presence and Search subscales (α = .86 and .87, respectively), and good discriminant and convergent validity. The MLQ-Presence subscale was negatively correlated with extrinsic religiosity, and positively correlated with life satisfaction, intrinsic religiosity, and positive emotions; the MLQ-Search subscale was positively associated with neuroticism, depression, and negative emotions, which is consistent with findings suggesting that the search for meaning is often distressing

because of the discrepancy between global and situational meaning systems (Steger et al., 2006). Test-retest reliability was strong at one month (r =.70 for Presence and .73 for Search) (Steger, Frazier, Oishi, & Kaler, 2006). The Presence and Search subscales of the MLQ demonstrated good internal consistency in a variety of populations including Asian Americans (α = .88 and.87), Latino/a Americans (α = .84 and .90), and European Americans (α = .90 and .91) (Kiang & Fuligni, 2010). For the current study, the internal consistency estimate of the MLQ-S is .92.

Procedure

The survey was advertised to students at a mid-size Midwestern university within Psychology and Women's Studies courses, via flyers on campus, at local businesses, at the local rape crisis and domestic violence center, and at a local community college. In addition, participants were recruited through 16 online listservs/newsletters which are relevant to violence against women (e.g., the APA Division 35-Psychology of Women and 56-Trauma Psychology), and through contacting 302 sexual assault and domestic violence service organizations across the nation and in Canada (see Appendix A for recruitment email to agencies).

Participants were directed to a website address for the study and were briefed about the personal and sensitive nature of the study subject matter prior to beginning the study. After agreeing to participate in the study and giving informed consent (see Appendix B), participants were then directed to the survey completed anonymously through Survey Monkey. Participants' names were not attached to their responses, and IP addresses were not recorded so that anonymity could be maintained. Participants were able to choose to (a) provide their student ID number to receive course credit, or (b) supply their email address in order to be entered into a lottery for one of five $15 Wal-Mart gift cards upon completion of the study (see Appendix D for

the debriefing form). Also, participants were offered additional readings on posttraumatic growth and positive coping, as well as local and national resources for seeking counseling, advocacy, legal, and other support services. Participants were offered referrals at the beginning of the study to ensure access to information, regardless of completion.

CHAPTER 4

RESULTS

Data Cleaning and Assumptions of Normality

Prior to performing analyses, all variables were examined to ensure they adhered to the univariate and multivariate assumptions of normality. Upon examination of data, z-scores revealed no outliers and that none of the variables violated skewness or kurtosis. Approximately 208 participants began the survey, and roughly 70% completed all scales. The point at which participants discontinued the survey revealed that 8 participants discontinued after the demographic questionnaire, 15 after the Sexual Experiences Survey (SES), 3 after the Belief in a Just World Scale (BJW), 1 after the Trauma Resilience Scale (TRS), and 3 discontinued after the Posttraumatic Growth Inventory (PTGI). Because the survey was open to survivors of various forms of trauma, it is unclear how many sexual assault versus non-sexual assault survivors discontinued at particular points. Incomplete cases were deleted from further analysis. In addition, 16 participants were excluded from analysis because they were male, and 18 participants responded incorrectly to at least one of two validity questions, and those cases were deleted from analysis.

Scale Statistics

The means, standard deviations, reliability estimates, and actual and possible score ranges for the Search subscale of the Meaning in Life Questionnaire (MLQ-S), Beliefs in Ultimate Justice subscale (BIUJ), the Supportive Spirituality and Problem-Solving Coping subscales of the Trauma Resilience Scale (TRS-SS and TRS-PS), the Posttraumatic Growth Inventory (PTGI), and the Emotion Thermometer Distress ratings (ET-Di) were obtained and reported in Table 3.

Correlations

Hypothesis One stated that beliefs in ultimate justice would be positively correlated with levels of posttraumatic growth. This finding was supported, as significant positive correlations were found between beliefs in ultimate justice and posttraumatic growth, $r(144) = .179$, $p = .032$. Hypothesis Two stated that the use of problem solving, spiritual coping, and meaning making strategies would be positively correlated with levels of posttraumatic growth. This hypothesis was partially supported, as significant positive correlations were found between: problem solving coping and posttraumatic growth, $r(144) = .380$, $p < .001$; spiritual coping and posttraumatic growth, , $r(144) = .371$, $p < .001$; but not for the relationship between search for meaning and posttraumatic growth, $r(144) = .118$, $p = .159$ (see Table 4). Due to mixed support, further exploratory analyses were performed, which are reported below in the exploratory analysis section. Because none of the significant correlations exceeded $r = .9$, multicollinearity can be assumed to not have a significant influence on the results.

Path Analysis

A path analysis was performed using SPSS syntax written by Preacher & Hayes (2008). Indirect and direct effects were examined, and the significance of the mediation pathways was determined using the bootstrapping method with the recommended 5,000 resamplings (Biesanz, Falk, & Savalai, 2010; Preacher & Hayes, 2008). Mediation generally is understood in terms of direct and indirect effects, in which the predictor variable is associated with each mediator, and each mediator is in turn associated with the outcome variable. In addition, the predictor variable is correlated with the outcome variable. In mediation, the direct effect of the predictor on the outcome variable approaches non-significance once the unique variance of the mediators (indirect effects) are accounted for in the model (Biesanz, Falk, & Savalai, 2010; Preacher &

Hayes, 2008). According to Preacher and Hayes (2008), significant meditation occurs when an indirect effect value of zero does not fall within the 95% bias corrected confidence interval.

Hypothesis Three stated that search for meaning, spiritual coping, and problem solving would serve as mediators in the relation between beliefs in ultimate justice and posttraumatic growth (see Figure 1). This hypothesis was partially supported; when all three mediating variables were entered into the path model, only spiritual coping and problem solving were significant mediators (see Figure 2). Because the search for meaning was not significant as a mediator or significantly correlated with posttraumatic growth, additional path models were performed. These models are reported in the alternative models section below.

For the hypothesized model in which the relationship between beliefs in ultimate justice and posttraumatic growth are mediated by meaning making, spiritual coping, and problem-solving, the overall model is significant, Adj. R^2 = .21, $F(4, 139) = 10.36$, $p < .001$ (see Figure 2). Upon entering all three mediators into the model, the direct effect of belief in ultimate justice on posttraumatic growth was not significant (direct effect = -.0150, *SE* = .13, $p = .908$). With all three mediators entered into the model, the total indirect effect was significant (indirect effect = .2878, 95% CI = [.1312, .4796], *SE* = .0877, $p < .05$). The unique indirect effect of search for meaning in life on the relation between beliefs in ultimate justice and posttraumatic growth was non-significant (indirect effect = .0443, 95% CI = [-.0065, .1358], *SE* = .0343, $p > .05$). The unique indirect effect of spiritual coping was significant (indirect effect = .1702, 95% CI = [.0636, .3339], *SE* = .0674, $p < .05$). The unique indirect effect of problem solving was significant (indirect effect = .0733, 95% CI = [.000, .1843], *SE* = .0468, $p < .05$).

Because the confidence interval did not contain zero, the indirect effect of spiritual coping and problem-solving were significant. Spiritual coping was a significant mediator such

that beliefs in ultimate justice were positively associated with spiritual coping (ß = .675), which in turn was positively associated with posttraumatic growth (ß = .252). Additionally, problem solving was a significant mediator. However, beliefs in ultimate justice were not significantly related to problem solving (ß = .095), but problem solving was positively related to posttraumatic growth (ß = .774).

Exploratory Analyses

Upon completion of the hypothesized correlation and path analysis, additional analyses were performed in order to ascertain whether other path models were significant. In addition, supplementary correlational analyses were performed, and differences according to prior counseling experience were reported.

Correlations and Group Differences

After performing the hypothesized correlations, results indicated partial support and further analyses were performed to ascertain differences between those who had and had not received prior counseling. Correlations between problem solving coping and spiritual coping, and posttraumatic growth remained significant and positive regardless of previous counseling, though the relationships varied in strength (see Tables 5 & 6). For those who had received counseling, there was a stronger positive correlation found between problem solving coping and posttraumatic growth, $r(67) = .503$, $p < .001$, as compared to those who had not received counseling, $r(77) = .244$, $p = .032$. Spiritual coping and posttraumatic growth were positively correlated for both those who had and had not received counseling, respectively, $r(67) = .383$, $p < .001$ and $r(77) = .311$, $p = .006$.

Results indicated prior counseling may have a potentially important impact on the relationship between search for meaning and posttraumatic growth (see Tables 5 & 6). For those

who *have* received counseling, the relationship between search for meaning and posttraumatic growth was not significant, $r(67) = -.070$, $p = .574$, but for those who *have not* received counseling, there is a positive correlation between search for meaning and posttraumatic growth $r(67) = .251$, $p = .027$. In addition, there appears to be differences regarding the relationship between beliefs in ultimate justice and posttraumatic growth, depending on whether one had received counseling. For those who sought out therapy, a significant positive correlation was found between beliefs in ultimate justice and posttraumatic growth, $r(67) = .254$, $p = .038$, but this relationship was not significant for those who had not sought counseling, $r(77) = .156$, $p = .177$.

Three subsequent one-way ANOVAs revealed some significant group differences between those who have previously sought counseling (or not) based on levels of posttraumatic growth, $F(1, 142) = 5.57$, $p = .020$. In addition, participants showed mean differences on their scores of posttraumatic growth, but not beliefs in ultimate justice, and search for meaning, depending on prior counseling experience. Those who had previous counseling ($n = 67$) compared to those who had not received counseling ($n = 77$) reported significantly higher mean scores of posttraumatic growth ($M = 2.97$, $SD = 1.12$, and $M = 2.57$, $SD = 0.94$, respectively). Participants who had previous counseling did not significantly differ in mean levels of search for meaning $F(1, 142) = 2.17$, $p = .14$. Mean scores of search for meaning did not significantly differ for those who had ($M = 1.23$, $SD = 0.32$) and had not ($M = 1.15$, $SD = 0.36$) sought counseling. There were also not significant differences in mean levels of beliefs in ultimate justice between though who had and had not received counseling, $F(1, 142) = 1.89$, $p = .171$. Those who had received counseling had roughly equivalentmean scores of beliefs in ultimate justice ($M = 1.36$, $SD = 0.70$) as compared to those who had not received counseling ($M = 1.51$, $SD = 0.67$).

Alternative Path Models

Because exploratory analyses suggested possible differences due to prior counseling experience, and additional path model was performed to determine if including counseling experience as a covariate would influence results (see Figure 3). Although this model proved significant, the overall results did not differ from the original hypothesized model. The overall effect of the model was significant, Adj. R^2 = .22, $F(5, 138) = 8.93$, $p < .001$ (see Figure 4). After entering all mediators into the model and controlling for counseling experience, the direct effect of beliefs in ultimate justice on posttraumatic growth was not significant (direct effect = .039, *SE* = .13, *p* = .77). Prior counseling did not significantly account for variance in the model (partial effect = -5.62, *SE* = 3.42, *p* = .103). As evident by zero not falling within the 95% confidence interval, the total indirect effects were significant (indirect effect = .27, 95% CI = [.1224, .4681], *SE* = .086, *p* < .05). The unique indirect effect of search for meaning was not significant (indirect effect = .04, 95% CI = [-.0111, .1292], *SE* = .034, *p* > .05). The unique indirect of spiritual coping was significant (indirect effect = .16, 95% CI = [.0478, .3220], *SE* = .069, *p* < .05). The unique indirect effect of problem-solving was significant (indirect effect = .08, 95% CI = [.0002, .1884], *SE* = .048, *p* < .05).

Spiritual coping was a significant mediator such that beliefs in ultimate justice were positively associated with spiritual coping (ß = .719), which in turn was positively associated with posttraumatic growth (ß = .221). Additionally, problem solving was a significant mediator, where beliefs in ultimate justice were significantly related to problem solving (ß = .099), and in turn, problem solving was positively related to posttraumatic growth (ß = .769).Thus, it appears that including previous counseling as a covariate did not significantly change the model.

Because search for meaning was not found to be a significant mediator in the hypothesized model and controlling for prior counseling did not have a significant effect, an additional model was analyzed in order to determine if search for meaning was a significant mediator in the relationship between beliefs in ultimate justice and self-reported levels of distress, as opposed to posttraumatic growth (see Figure 5). The overall effect of the model was significant, Adj. R^2 = .15, $F(4, 139) = 7.10$, $p < .001$ (see Figure 6). The total indirect effect of beliefs in ultimate justice on distress, mediated by meaning making, spiritual coping, and problem solving, was not significant (indirect effect = -.005, 95% CI = [-.0270, .0161], *SE* = .0109, $p < .05$). However, according to Preacher and Hayes (2008), specific indirect effects should still be examined even in the case of a total non-significant indirect effect due to the possibility of suppression in the model. After controlling for the effects of the mediators, the direct effect of beliefs in ultimate justice on distress was not significant (direct effect = .0024, *SE* = .017, $p = .8331$). The unique indirect effect of search for meaning was significant (indirect effect = -.0095, 95% CI = [-.0227, -.0018], *SE* = .0052, $p < .05$). The unique indirect effect of spiritual coping was non-significant (indirect effect = -.0069, 95% CI = [-.0210, .0055], *SE* = .0066, $p > .05$). The unique indirect effect of problem solving was significant (indirect effect = .0114, 95% CI = [.0000, .0275], *SE* = .0069, $p < .05$).

Search for meaning was a significant mediator such that beliefs in ultimate justice were positively associated with search for meaning (β = .133), which in turn was negatively associated with distress (β = -.071). Additionally, problem solving was a significant mediator, where beliefs in ultimate justice were significantly related to problem solving (β = .095), and in turn, problem solving was positively related to distress (β = .120). Thus, it appears that search for meaning and

problem solving, but not spiritual coping, are significant mediators in the relationship between belief in ultimate justice and distress.

Participants' Feedback on the Study

Subsequent to completing all measures, participants were invited to provide feedback regarding their experiences of taking the study. In total, 69 participants chose to provide feedback. The majority of participants expressed thanks and gratitude for being offered the opportunity to participate, and to the primary researcher for conducting a study on the topic (*n* = 25). For example, one participant stated "I had pleasure in doing this study because it just helped me get my "story" out in a way and kind of express what I needed to, to deal with the things that go on in my life on a day to day basis." Several also reported that they hoped to help future survivors by participating (*n* = 4), or that they felt they had been able to grow and take perspective of their life by participating in this study (*n* = 10). For example, one survivor reported that by taking the study, it "Opened up my eyes to a few things I have not thought about in a while. Makes me want to make changes in life." Another reported that "AFTER GOING THROUGH THE SURVEY, I FEEL MY FUTURE IS PROMISING AND I REFUSE TO LET THAT PAST SITUATION HOLD ME BACK FOREVER!" A number of participants also reported that they wished they had been able to mark multiple traumas (*n* = 4), that the study brought up memories of the trauma (*n* = 9), that there should have been an N/A option for atheist individuals on the questions about levels of spirituality/religiosity (*n* = 6), or that the survey felt repetitive or lengthy (*n* = 8).

CHAPTER 5

DISCUSSION

While research regarding sexual violence and posttraumatic growth has blossomed in recent decades, much still remains to be understood about survivors' experiences of assault and healing (Burt & Katz, 1988; Frazier & Berman, 2008; Resick, 2001). Calhoun and Tedeschi (1998) have called for additional research to study the process through which posttraumatic growth research occurs, and Frazier and Berman (2008) also have proclaimed the dire need to identify mediators which may explain the path to posttraumatic growth after sexual violence. In answer to these calls, the current study examined the mediating effects of meaning making, spiritual coping, and problem-solving on the relationship between beliefs in ultimate justice and posttraumatic growth.

In hopes of testing and expanding the Schaefer & Moos' (1998) model of posttraumatic growth, their model was utilized as a framework to formulate the hypotheses of this study. To review, the current model proposed five systems which influenced trauma survivors' outcomes of growth. The five systems included: (I) Personal system relating traits, characteristics, worldview, etc.; (II) Environmental system including social support and family environment; (III) Trauma system including type, severity, and duration of traumatic event; (IV) Coping system which includes approach or avoidance coping styles; and (V) Outcome system which refers to various outcomes of growth such as enhanced strength, support, or coping skills. As such, the hypothesized model fits with Schaefer & Moos' (1998) model where beliefs in ultimate justice fall under the personal system, meaning making, spirituality, and problem-solving fall under the coping system, and posttraumatic growth falls under the outcome system.

The proposed hypotheses were partially supported. Hypothesis One was supported, which showed that there were significant positive correlations between beliefs in ultimate justice and outcomes of posttraumatic growth. Hence, sexual assault survivors who had strong beliefs in ultimate justice were also likely to report higher levels of posttraumatic growth. This is consistent with the literature which suggests that beliefs in ultimate justice, when differentiated from other forms of justice world beliefs, are associated with posttraumatic growth (Furnham, 2003; Lucas et al., 2008). Hypothesis Two was partially supported, as significant and positive correlations were found between spiritual coping and posttraumatic growth, and between problem-solving and posttraumatic growth. As such, survivors who reported more frequent use of supportive spirituality to cope with their trauma also reported higher levels of posttraumatic growth; and participants who reported a higher tendency of utilizing problem-solving as a method of coping also were more likely to report higher levels of posttraumatic growth. These results are consistent with coping and posttraumatic growth research which has found spirituality and problem solving to be significantly associated with positive outcomes (Ahrens et al., 2010; Frazier et al., 2004). Furthermore, participants in the current study indicated levels of posttraumatic growth, distress, problem solving, meaning making, and spiritual coping which are roughly equivalent to those found in other studies (Ahrens et al., 2010; Madsen & Abell, 2010; Mitchell, 2007, 2008, 2010; Steger et al. 2006), further supporting the soundness of the measures utilized in the current study. However, contrary to the hypothesis, search for meaning as a method of coping with sexual violence was not significantly associated with higher levels of posttraumatic growth.

Because search for meaning was not associated with posttraumatic growth, additional exploratory analyses were performed which revealed that that prior counseling experience had an

influence on this relationship. For those who *had* sought counseling, there was not a relationship between search for meaning and posttraumatic growth. However, for those who *had not* sought counseling, there was a positive relationship between the search for meaning and posttraumatic growth. One potential explanation for this finding may be that having sought previous counseling was effective at building some level of meaning for survivors, and thus the search for meaning has less of an influence on growth; whereas those who have not sought counseling are still actively searching for meaning, and thus this search has a larger influence on the growth process. It is unclear from the literature whether previous counseling has been assessed in the meaning making research, but this finding may explain some of the inconsistencies regarding meaning making and associations with distress, coping, and posttraumatic growth (Steger et al, 2006). In addition, prior counseling seemed to influence the relationship between beliefs in ultimate justice and posttraumatic growth. For those who *had* sought counseling, there was a significant positive relationship between beliefs in ultimate justice and posttraumatic growth. However, those who *had not* sought counseling, no significant association was found between beliefs in ultimate justice and posttraumatic growth. One potential explanation for this finding is that through counseling, survivors were able to make sense of their trauma and restore some of the "shattered assumptions" about justice in the world, which in turn was associated with positive outcomes such as posttraumatic growth (Janoff-Bulman, 1992; Lucas et al., 2008).

Support of Schaefer & Moos' (1998) model of posttraumatic growth

Schaefer & Moos' (1998) model of posttraumatic growth was partially supported by the proposed model's aforementioned results: spiritual coping and problem solving coping (i.e., approach coping), but not search for meaning, significantly mediated the relation between beliefs in ultimate justice and posttraumatic growth. In addition, the current study serves to expand the

given model. While there had been ample research regarding individual traits, characteristics, and levels of resilience, no known prior studies examined beliefs in ultimate justice as a part of worldview for the given model. In addition, though research has demonstrated the concept of ultimate justice in a wide range of settings, unfortunately, relatively little research has examined beliefs in a just world specifically within sexual assault survivors (Furnham, 2003). Hence, the current study adds to the literature by demonstrating the importance of ultimate justice as part of the personal system of Schaefer & Moos' (1998) model, but also demonstrates its importance as a predictor of coping and growth for sexual assault survivors. Below, each variable will be discussed in terms of its association with the other variables, as well as how it supports Schaefer & Moos (1998) model.

Beliefs in Ultimate Justice (S-I). In this study, beliefs in ultimate justice were positively associated with search for meaning, spiritual coping, and posttraumatic growth. This is consistent with prior research which has found that when the concept of ultimate justice is parceled out from general just world beliefs, it is associated with positive outcomes (Dalbert, 1998; Furnham, 2003; Lucas et al., 2008). It is possible that this worldview is associated with the utilization of effective coping strategies, which may ultimately lead to a sense of meaning in the trauma and posttraumatic growth. As such, the construct of justice and ultimate justice in particular, may have profound implications for positive outcomes of trauma and is an important area of future study. This implies that holding beliefs and restoring shattered beliefs regarding ultimate justice are beneficial worldviews for survivors of sexual assault. Because sexual violence survivors often do not receive justice from the criminal justice system, society, or social supports, it may be helpful to rely on the belief that victims will one day be compensated and perpetrators punished. This belief may allow survivors to make sense of their trauma experience, restore

beliefs in the goodness of the world, choose positive coping strategies, and subsequently achieve growth.

Coping (S-IV). The coping system of the Schaefer & Moos (1998) model had also previously been limited primarily to studies of approach-avoidance coping. The current study adds to the model and coping literature by showing the importance of meaning making, spiritual coping, and problem-solving as significant methods of approach coping. Through the use of these coping methods, the survivor confronts the trauma (an approach strategy), though perhaps in differing ways. In the current study, it appears that spiritual coping and problem-solving are positively related to outcomes of growth, a finding that is supported in prior literature (Bell, 1999; Frazier et al., 2004; Frazier & Berman, 2008; Madsen & Abell, 2010; Pargament & Mahoney, 2009).

In the current study, both spiritual coping and problem-solving were significant mediators between ultimate justice and posttraumatic growth. Beliefs in ultimate justice naturally relate to a belief in a higher spiritual power, so it seems natural that those with such a worldview utilize their spiritually to cope with trauma and are able to achieve growth. Similarly, for those who have experienced a trauma and are forced to reconstruct their "shattered assumptions" about the world (Janoff-Bulman, 1992), problem-solving strategies may serve as an effective method to restore one's worldview and achieve growth. And as discussed previously, holding just world beliefs (particularly beliefs in ultimate justice) is associated with increased use of active coping, which is in turn associated with posttraumatic growth outcomes (Dalbert, 1998; Fetchenhauer, 2005; Furnham, 2003; Lucas et al., 2008). Thus, spiritual coping and problem-solving were found to be effective mediators in the proposed path model, which supports Schaefer & Moos' (1998) model of posttraumatic growth and is also consistent with coping, just world, and

posttraumatic growth literature (Fetchenhauer, 2005; Frazier et al., 2004; Furnham, 2003; Lucas et al., 2008).

While spiritual coping and problem-solving were significant mediators in the hypothesized model, search for meaning as a mediator demonstrated conflicting results. Though beliefs in ultimate justice were strongly positively associated with the search for meaning, search for meaning was not associated with posttraumatic growth, and was not a significant mediator between ultimate justice and posttraumatic growth. Previous research suggests a positive correlation between levels of negative symptoms (i.e., depression) and search for meaning (Park, 2010; Steger et al., 2006). According to this research, because survivors are working to create meaning (but have not necessarily found it), they experience distress as they are still making sense of their negative experiences. This finding would explain, in part, why search for meaning was not associated with posttraumatic growth in the hypothesized model. As a result, an additional path model was performed with distress (instead of posttraumatic growth) as the outcome variable, which is explained in the following section.

Additional Path Model

Because correlations suggested a potential difference due to prior counseling, an additional path model was performed to examine how it might affect the proposed relationship between beliefs in ultimate justice and posttraumatic growth, as mediated by meaning making, spiritual coping, and problem solving. Overall, prior counseling experience seemed to have no influence on this relationship, and results did not significantly differ from the proposed model. However, with a larger sample size, prior counseling may have a larger impact on results. Because the subsamples sizes for people with prior counseling experience were too small, it was

not possible to run separate analyses. However, future researchers should consider taking this variable into account.

While both spiritual coping and problem solving were significant mediators in the proposed model, only problem solving and search for meaning (but not spiritual coping) were significant mediators in an additional path model examining the relationship between beliefs in ultimate justice and distress. Results indicated that beliefs in ultimate justice were unrelated to reported levels of distress. However, problem solving was positively related to distress, and significantly mediated the relationship between beliefs in ultimate justice and distress. Thus, those who held beliefs in ultimate justice and reported using problem solving also reported higher levels of distress. There are several potential explanations for this finding. One explanation is that those participants who were already experiencing more distress due to shattered assumptions about justice in the world were actively utilizing more problem solving strategies to cope. Second, those who utilized problem solving coping were forced to confront their trauma as opposed to utilizing avoidance coping, which in turn may result in increased feelings of distress. Because they were actively thinking about their experiences, it is understandable to report higher levels of distress. As such, survivors may experience more distress, which is consistent with other research suggesting that avoidance coping can result in emotional numbing (Heppner & Baker, 1997). Thus, the experience of distress does not necessarily mean that survivors are not healing or growing through the process of growth.

Spirituality was not associated with levels of distress and did not mediate the relationship between beliefs in ultimate justice and distress, which is somewhat inconsistent with literature suggesting that spirituality coping is often associated with reduced levels of distress (Ahrens et al., 2010). One possible explanation is that *negative* spiritual coping is related to distress, but not

positive spiritual coping. Because the two were not differentiated in the current study, the effect of negative spiritual coping on the relationship between beliefs in ultimate justice and distress may have been suppressed, leading the mediator to have no significant effect.

In the additional path model, search for meaning was a significant mediator, but was negatively associated with distress. Hence, the search for meaning seems to predict reduced levels of distress, but it does not necessarily predict growth as apparent in the hypothesized model. These results are supported by literature which suggests that the process of meaning making is associated with lower levels of distress (Frazier & Burnett, 1994; Wright et al., 2007). Perhaps due to additional and co-occurring coping mechanisms, search for meaning appears to reduce levels of distress by helping individuals feel a greater sense of control in their healing process. However, it is of some interest that, though still significant, the effect size in this alternative model is quite a bit lower than that of the hypothesized model. It is possible that the measured variables (beliefs in ultimate justice, meaning making, problem solving, and spiritual coping) simply do not predict outcomes of distress as well as other variables might. For example, by including trauma-related variables (e.g. severity of the trauma, length since occurrence, or whether the trauma was a single event vs. ongoing) may result in a much stronger effect size.

There are several other potential explanations for the inconclusive findings regarding search for meaning as a mediator in the above models. One explanation is that we lack a measure which can accurately assess the process of making meaning. It is possible that items on the MLQ do not adequately encapsulate survivor's search for meaning, and that the construct is not accurately being measured, leading to conflicting results. A second potential explanation is that making meaning is a very complex construct and perhaps has multiple roles, such that it relates to both positive outcomes of growth as well as reductions in perceptions of distress. This would

be consistent with literature suggesting that feelings of distress and growth are separate constructs which may co-occur, and are not necessarily mutually exclusive (Grubaugh & Resick, 2007). A third explanation is that search for meaning may be one in a link of several mediators, which may ultimately lead to posttraumatic growth. If this is the case, the influence of meaning making may be suppressed due to lost variance. Upon examining the findings of the current study, beliefs in ultimate justice were positively correlated with search for meaning. In addition, spiritual coping had a strong positive correlation with posttraumatic growth. Perhaps after experiencing a traumatic event, participants who hold strong beliefs in ultimate justice are led to begin searching for meaning as a method of coping and making sense of the trauma. In their search for meaning, they may rely on their spirituality (or some other coping strategies) as a way of making meaning of the event, which subsequently leads to posttraumatic growth. As such, meaning making may be the first in a chain of mediators in the relationship between ultimate justice and posttraumatic growth. Furthermore, by further analyzing the relation between search for meaning and specific subscales of the PTGI, additional significant relationships may be found. It is possible that search for meaning was not a significant mediator in the hypothesized model due to lost variance, which was potentially suppressed by certain subscales in the measure of posttraumatic growth which have less than acceptable reliability. By examining more singular dimension of growth (e.g. such as Spiritual Change or Relating to Others), different findings may emerge. Though beyond the scope of the current study, future researchers may benefit from examining the relation between search for meaning and more specific dimensions of posttraumatic growth, using more complex statistical models, assessing chains of mediators, and simultaneously examining both distress and posttraumatic growth as outcomes.

Practical Implications

The results of the current study hold important practical implications for clinicians and researchers. However, I would like to provide a note of caution for counselors and researchers alike. While the above results show the importance of spirituality, problem-solving, and meaning on the relationship between beliefs in justice and posttraumatic growth, it is important to remember that survivors heal and experience their trauma in different ways. In order to maintain a social justice framework, it is critical to understand and appreciate the unique course every survivor takes, and to not give the impression that a given path of healing is more appreciated or valuable than another. Due to circumstances outside of a survivor's control, there are a number of societal and social influences which may influence the course of healing. As such, survivors should not be blamed if they do not achieve an imposed level of growth, nor their experiences devalued. For example, those who experience long-term trauma or who are still experiencing their trauma may not be in a safe or supportive enough environment to achieve posttraumatic growth. In addition, it should be understood that posttraumatic growth cannot be externally imposed, but most come from the survivor. Helping a survivor achieve growth does not mean minimizing painful aspects of their experience, but helping him/her to utilize strengths and methods of coping.

Within counseling, the current study has profound implications. With this knowledge, counselors may gain greater understanding of the processes which lead to posttraumatic growth. As such, counselors may work to help individuals utilize meaning making, problem-solving and spirituality in coping with their trauma. As evident by the aforementioned results, these are viable methods of coping and may serve to help victims reconstruct their worldview such that they are able to achieve greater levels of posttraumatic growth and/or reduce feelings of distress.

In addition to traditional techniques, counselors should use this knowledge to explore methods of coping and meaning making with clients, as these may be critical avenues through which clients restore their shattered assumptions about the world. For example, clinicians can help clients to make meaning of their trauma in helping to reduce feelings of distress, while promoting approach problem-solving and spirituality in order to achieve growth.

Within the academic realm, the current study holds important avenues through which future researchers may continue to explore coping, meaning making, and posttraumatic growth and build upon existing theories. These avenues will be further explored in the section below.

Future Directions

The current study has shown a number of important results, and paves the way for potentially fruitful future directions in sexual violence research. In light of results of the current study, there are five primary suggestions for future researchers. The first avenue would be to investigate the influence of multiple victimizations, age at victimization, additional traumas, and types of trauma. There may be important differences in worldview, coping, and growth based on one's trauma experience, and findings could hold significant implications for therapists working with trauma survivors. A second area of future research will be to perform studies examining additional variables which may influence posttraumatic growth. While the current study examined the importance of several variables, any construct as complex as interpersonal trauma and sexual violence likely has a host of influences. It may be fruitful to assess the effects of various societal factors, social influences, self-perceptions of a victim/survivor identity, and acceptance of rape culture on outcomes of posttraumatic growth. In addition, researchers may gain a wealth of information by examining the influence of classism, sexism, ageism, ableism,

and other forms of oppression as part of the Environmental System of Schaefer and Moos' model of posttraumatic growth.

Furthermore, additional research is needed to understand the impact of sexual violence and experiences of growth for additional gender and ethnic populations. While the majority of sexual assault survivors are female, males can also be victims of sexual violence and may have very different experiences of justice and healing. For example, in the United States we are brought up in a patriarchal society in which men are taught to be strong, in control, "protectors", dominant, and invulnerable (Aymer, 2010). However, experiences of sexual assault directly threaten and oppose the internalized messages and gender roles assigned to men. Furthermore, people of color may also have different experiences of justice and posttraumatic growth. Racism and discrimination are still prevalent in modern society and may influence one's belief in the world as a just, fair, or predictable place, and possibly affect the manner in which one copes and subsequently grows from traumatic experiences. Understandably, if an individual deals with daily racism and also suffers from a sexual assault, it is possible that they have never experienced the world as just and will be unable to make meaning from those experiences, as compared to someone who had not experienced chronic racism or oppression. According to Janoff-Bulman (1992), traumatic events "shatter" our assumptions about the world which we try to restore through making sense of our experiences, but it is possible that some individuals have never had assumptions about the world as good, safe, or just, and thus utilize a different worldview. Future researchers should further investigate the unique worldviews, coping methods, and experiences of posttraumatic growth in order to understand the importance of these variables for additional gender and ethnic groups.

Third, longitudinal studies examining changes in posttraumatic growth throughout the life course are needed, and may yield an abundance of information about the course of growth and healing from trauma. For example, the course of posttraumatic growth may vary over time and at different phases of life. Additional unknown variables may have different impacts at different phases of growth which are difficult to assess in cross-sectional research. Fourth, future researchers should consider utilizing multiple types of research methods. While quantitative research provides information about sexual violence and posttraumatic growth, qualitative and mixed-method designs should be conducted gain a more in-depth understanding about survivors' experiences of violence and subsequent growth. And finally, additional research is needed to further examine the mediation chains through which meaning making operates. Because of the complexity of the construct and the subjective nature of meaning, future studies should strive to ascertain other potential variables that influence the process of meaning making, and which may ultimately lead to growth. In addition, it will be important to test more complex models which simultaneously examine the co-occurrence of both positive and negative outcome variables, rather than only one outcome or the other as this assumes that they are mutually exclusive.

Limitations

As with any research, there are always a number of limitations. Below, seven primary limitations are considered. First, the current study utilized an online survey method which brings questions of validity. Because of the anonymity of online research, it is impossible to verify the identity/experiences of participants, and there is no way of knowing that participants are actually survivors of a traumatic event. Though not specific to the current study, researchers utilizing survey method often worry about the accuracy of participants' self-reported responses. However, to address this common problem, a number of validity questions were included. For example,

throughout the survey, two questions were included which asked participants to choose a specified response, such as "for this item, please select 'strongly agree'." As such, participants who did not carefully read and respond to all items would not necessarily choose the correct response. Those who did not respond correctly to these questions were excluded from further analysis.

A second limitation of the study concerns the population of participants. Because the majority of participants were recruited through University courses which offered some form of class credit, results may not be generalizable to all populations. Though a number of participants from the community were included, a vast majority consisted of White, heterosexual, Christian, middle-class young adults in a mid-western University setting. Even among those participants who were not students, most had at least a bachelor's level education, or higher. As such, findings should be interpreted with caution, and great care should be taken before results are generalized to populations from more diverse racial/ethnic, religious, and socioeconomic backgrounds. Third, the current study only focused on female participants. Though studies of male and transgender experiences of sexual violence are severely lacking, the primary researcher lacked the additional time and resources from which to gain an adequate sample of these populations. As such, those participants who identified as male were excluded from analysis (no sexual assault survivors identified as transgender).

A fourth limitation is that the study was advertised to survivors of a number of traumatic events and was not limited to sexual violence, and some participants may have experienced traumas (e.g., natural disaster, illness, accidents) in addition to sexual assault. In addition, participants were not required to identify as a survivor of sexual assault. This creates a less clearly defined sample, as participants who identify as a sexual assault victim or who have

experienced additional traumas may have different perceptions and/or experiences compared to those who have experienced only sexual violence. However, this is also a potential strength of this research. Because the study was advertised for all trauma groups, those who may have been worried about identifying as a victim of sexual violence were potentially more likely to participate because they were not required to self-identify as a victim. Fifth, the influence of multiple sexual traumas, chronic sexual violence, and length of time since sexual trauma were not assessed. Those who experienced sexual traumas in childhood and adulthood may have different perceptions of ultimate justice, may cope in different ways, and may have different experiences of posttraumatic growth. Sixth, as with all cross-sectional and non-experimental research, it is not possible to draw causal or longitudinal conclusions about the long-term implications of sexual violence and posttraumatic growth with regards to beliefs in ultimate justice, meaning making, spirituality, and coping. While the proposed mediators are significant, there may be additional underlying processes and variables which influence posttraumatic growth over the life course. Qualitative studies can aid in understanding the processes of posttraumatic growth. Experimental and longitudinal studies must be performed before causal conclusions can be reached. A final limitation of the current study concerns the method of assessing meaning making. There are no measures which specifically assess meaning for sexual assault survivors and their experiences. In addition, the measure used has a relatively limited number of items (five). As a result, the results may have been affected because survivors' experiences of meaning making were not fully captured or evaluated by the current measure.

Summary and Conclusions

As can be seen from the review of the above literature and results, there is an important relationship between posttraumatic growth, belief in a just world, coping, and meaning making in

the lives of sexual assault survivors. Moreover, consistent with the Schaefer and Moos' (1992, 1998) model of posttraumatic growth, results partially support the theory that coping and appraisal of the trauma (S-IV) mediate the relationship between personal traits, beliefs, and worldviews (S-I) and outcomes of posttraumatic growth (S-V). The current study adds to the previous literature by addressing the roles of beliefs in justice and meaning making in Schaefer & Moos' (1998) model of posttraumatic growth. Research shows that just world beliefs and coping have significant influences on posttraumatic growth (Furnham, 2003; Folkman & Lazarus, 1991; Park et al., 2008), as confirmed by current results. In addition, many studies have demonstrated the correlates of posttraumatic growth (Fetchenhauer et al., 2005; Folkman, 2000; Kennedy et al., 1998; Park & Ai, 2006; Prati & Pietrantoni, 2009), yet more research is still needed in order to explain how or why these relationships occur.

There are no known studies that have addressed all of these variables in a single study, as previous research has been limited to investigation of only one or two of these constructs, or has been conducted with populations other than sexual assault survivors. In addition, in the previous sexual assault research, distinctions were not made between the immanent and ultimate justice aspects of just world beliefs, and such beliefs have not been examined in relation to problem solving, spiritual coping, and meaning making, and their effects on posttraumatic growth. In this way, the current study adds to the literature and holds potentially important implications for research and clinicians. Results demonstrate the importance of bolstering coping to facilitate growth, and utilizing meaning making strategies to help reduce negative symptoms. Findings thus contribute to the wealth of knowledge that may help survivors achieve posttraumatic growth and reduce levels of distress after a sexual assault.

In conclusion, I wish to express my personal hopes for this research and the messages that it may convey. As an advocate and counselor who has worked with survivors of sexual violence, I have heard countless stories of heartbreak, sorrow, and pain. Some of my clients' experiences have been so horrific and terrible, it is difficult to imagine a world in which such atrocities occur. However, what has struck is not the nature of those experiences in and of themselves, but the strength and power which these survivors possess. While they have experienced unthinkable traumas, *they have survived*. I recall an instance when I sat with a survivor and felt overcome with admiration and awe because, despite all odds, she continued to persevere and fight. It is this admiration and awe which I have brought to my research, and which I hope to convey to the survivors who so selflessly chose to participate in order to help future survivors. My goal in doing this research, more important than contribution to any theory, is to provide hope, encouragement, and "future" for anyone who has experienced sexual violence – to send the message that *you can survive.*

Table 1

Participants' Demographic Backgrounds

Variable	*n*	*% of Total N*
Race/Ethnicity		
African American	23	23.0
Asian American/Pacific Islander	1	0.7
Chicano/Hispanic/Latino/a	10	6.9
White American	101	70.1
Bi/Multi-racial	5	3.5
Native American	2	1.4
Other	2	1.4
Sexual Orientation		
Exclusively homosexual	10	6.9
Mostly homosexual	8	5.6
Bisexual	11	7.6
Mostly heterosexual	22	15.3
Exclusively heterosexual	93	64.6
Relationship Status		
Single	60	41.7
Partnered/Cohabitated	39	27.1
Married	34	23.6
Divorced	11	7.6
Widowed	0	0.0
Education Level		
Some high school	0	0.0
High school diploma/GED	5	3.5
Some college/attending	64	44.4
Associate's/Bachelor's degree	33	22.9
Graduate/professional degree	41	28.5
Unsure/prefer not to respond	1	0.7
Family Financial Background		
Could never make ends meet	12	8.3
Often could not make ends meet	24	16.7
Sometimes could not make ends meet	12	8.3
Often could make ends meet	47	32.6
Always could make ends meet	47	32.6
Not sure/prefer not to respond	2	1.4

Table 1 Continued

Demographic Variables

Variable	*n*	*M*	*SD*	*% of Total N*
State				
Alabama	1			0.7
California	7			4.2
Colorado	7			4.2
Connecticut	1			0.7
Georgia	1			0.7
Idaho	1			0.7
Illinois	85			59.0
Indiana	1			0.7
Maryland	1			0.7
Michigan	2			1.4
Missouri	1			0.7
New York	2			1.4
North Carolina	1			0.7
North Dakota	1			0.7
Ohio	2			1.4
Pennsylvania	3			2.1
Tennessee	4			2.8
Utah	2			1.4
Virginia	4			2.8
West Virginia	3			2.1
Wisconsin	12			8.3
Other (Canada)	1			0.7
No Response	1			0.7
Recruitment				
Flyer or Poster	29			20.1
Email	47			32.6
Community agency	5			3.5
Therapist/counselor	1			0.7
Professor/TA/Class	46			31.9
Other (Facebook, friends)	16			11.1
Religious/Spiritual Preference				
Agnostic	13			9.0
Atheist	11			7.6
Buddhist	6			4.2
Christian	82			56.9
Humanist	1			0.7
Mormon	1			0.7
None	14			9.7
Spiritual	5			3.5

Table 1 Continued

Demographic Variables

Variable	*n*	*M*	*SD*	*% of Total N*
Religious/Spiritual Preference Continued…				
Unitarian	4			2.8
Pagan	2			1.4
Other (e.g. Wiccan, Quaker)	5			3.5
Level of Spirituality		4.71	1.94	
1 (Least Spiritual)	15			10.4
2	10			6.9
3	10			6.9
4	26			18.1
5	18			12.5
6	36			25.0
7 (Most Spiritual)	29			20.1
Level of Religiosity		3.23	1.94	
1 (Least Religious)	46			31.9
2	15			10.4
3	15			10.4
4	22			15.3
5	24			16.7
6	18			12.5
7 (Most Religious)	4			2.8

Note. N = 144

Table 2

Trauma Frequencies

Variable	*N*	*n*	*% of Total N*
Completed Rape			
Oral Rape	75		52.1
0		69	47.9
1		24	16.7
2		16	11.1
3+		35	24.3
Vaginal Rape	106		73.6
0		38	24.6
1		39	27.1
2		21	14.6
3+		46	31.9
Anal Rape	49		34.0
0		95	66.0
1		25	17.4
2		13	9.0
3+		11	7.6
Attempted Rape			
Oral Rape	88		61.1
0		56	38.9
1		25	17.4
2		21	14.6
3+		42	29.2
Vaginal Rape	104		72.2
0		40	27.8
1		27	18.8
2		22	15.3
3+		55	38.2
Anal Rape	53		36.8
0		91	63.2
1		21	14.6
2		15	10.4
3+		17	11.8
Time since trauma			
0-3 months		11	7.6
4-6 months		3	2.1
7-12 months		7	4.9
1-3 years		20	13.9
4-6 years		26	18.1
7-10 years		17	11.8
11-14 years		18	12.5
15 or more years		42	29.2

Note. N = 144

Table 3

Means, Standard Deviations, Ranges, and Reliability Estimates for the Total Sample

Variable	*M*	*SD*	*Actual Ranges*	*Possible Ranges*	*Cronbach's Alpha*
BIUJ	2.33	1.12	1.69 - 2.98	0 - 5	.93
MLQ-S	5.00	1.44	4.75 - 5.34	1 - 7	.92
TRS					
SS	4.22	1.89	3.39 - 4.79	1 - 7	.98
PS	5.43	0.85	4.87 - 6.25	1 - 7	.90
PTGI	2.76	1.04	1.79 - 3.54	0 - 5	.93
ET-Di	6.07	2.70	0.00 - 10.00	0 - 10	

Note. *N* = 144. Belief in Ultimate Justice = BIUJ. Meaning in Life Questionnaire Search Subscale = MLQ-S. Trauma Resilience Scale Supportive Spirituality = TRS-SS. Trauma Resilience Scale Problem Solving = TRS-PS. Posttraumatic Growth Inventory = PTGI. Emotion Thermometer Distress rating = ET-Di.

Table 4

Intercorrelations among Belief in Ultimate Justice, Search for Meaning, Spiritual Coping, Problem-Solving Coping, and Posttraumatic Growth

Variable	*BIUJ*	*MLQ-S*	*TRS-SS*	*TRS-PS*	*PTGI*	*ET-Di*
BIUJ	1	.265**	.396***	.160	.179*	-.014
MLQ-S		1	.049	-.088	.118	-.195*
TRS-SS			1	.292***	.371***	.014
TRS-PS				1	.380***	.255***
PTGI					1	.147
ET-Di						1

Note. N = 144. BIUJ= Belief in Ultimate Justice, MLQ-S= Meaning in Life Questionnaire, TRS-SS = Trauma Resilience Scale–Supportive Spirituality, TRS-PS = Trauma Resilience Scale–Problem Solving, PTGI= Posttraumatic Growth Inventory, Distress = Emotion Thermometer–Distress. .

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 5

Intercorrelations among Belief in Ultimate Justice, Search for Meaning, Spiritual Coping, Problem-Solving Coping, and Posttraumatic Growth for the Participants with Prior Counseling Experience

Variable	*BIUJ*	*MLQ-S*	*TRS-SS*	*TRS-PS*	*PTGI*	*ET-Di*
BIUJ	1	.336**	.335**	.209	.254*	-.110
MLQ-S		1	- .153	-.156	-.070	-.278*
TRS-SS			1	.440***	.383***	.076
TRS-PS				1	.503***	.349**
PTGI					1	.220
ET-Di						1

Note. N = 67. BIUJ = Beliefs in Ultimate Justice, MLQ-S = Meaning in Life Questionnaire, TRS-SS = Trauma Resilience Scale–Supportive Spirituality, TRS-PS = Trauma Resilience Scale–Problem Solving, PTGI= Posttraumatic Growth Inventory, ET-Di = Emotion Thermometer–Distress. .

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6

Intercorrelations among Belief in Ultimate Justice, Search for Meaning, Spiritual Coping, Problem-Solving Coping, and Posttraumatic Growth for the Participants with No Prior Counseling Experience

Variable	*BIUJ*	*MLQ-S*	*TRS-SS*	*TRS-PS*	*PTGI*	*ET-Di*
BIUJ	1	.243*	.513***	.126	.156	.076
MLQ-S		1	.175	.101	.251*	-.153
TRS-SS			1	.141	.311**	-.056
TRS-PS				1	.244*	.358***
PTGI					1	.068
ET-Di						1

Note. $N = 77$. BIUJ = Beliefs in Ultimate Justice, MLQ-S = Meaning in Life Questionnaire, TRS-SS = Trauma Resilience Scale–Supportive Spirituality, TRS-PS = Trauma Resilience Scale–Problem Solving, PTGI= Posttraumatic Growth Inventory, ET-Di = Emotion Thermometer–Distress.

* $p < .05$, ** $p < .01$, *** $p < .001$.

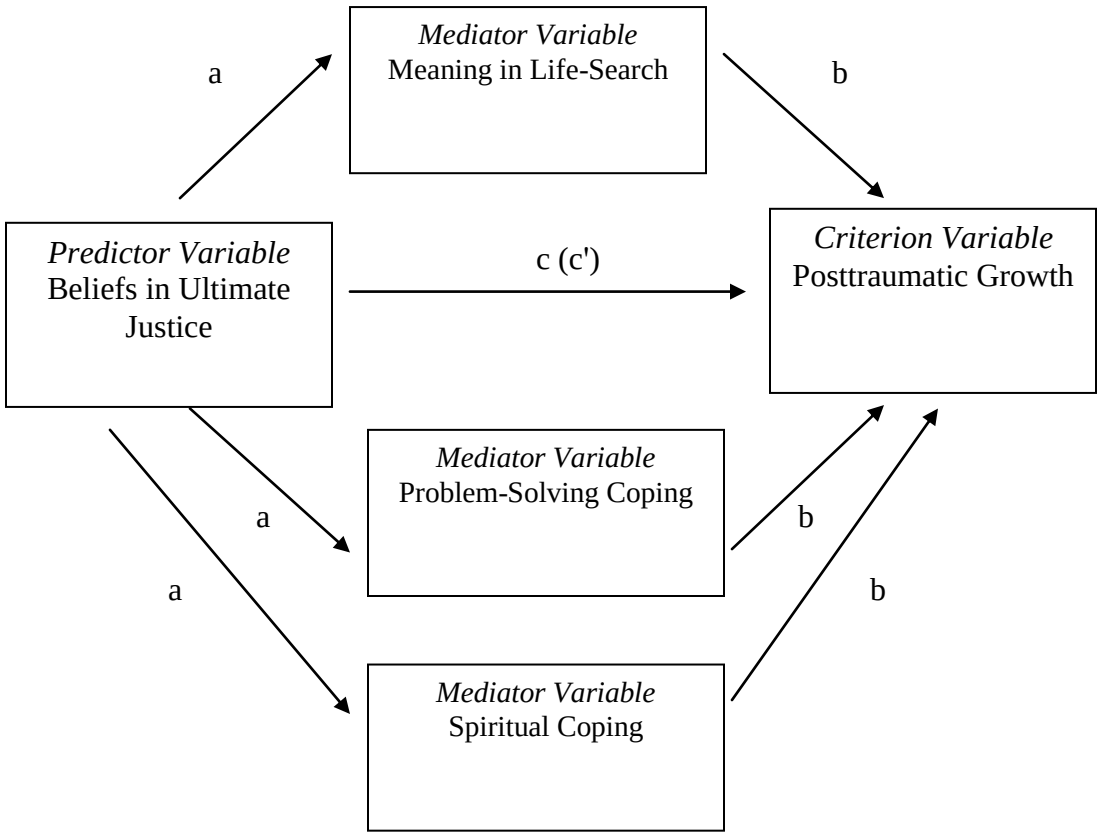

Figure 1. The proposed path model.

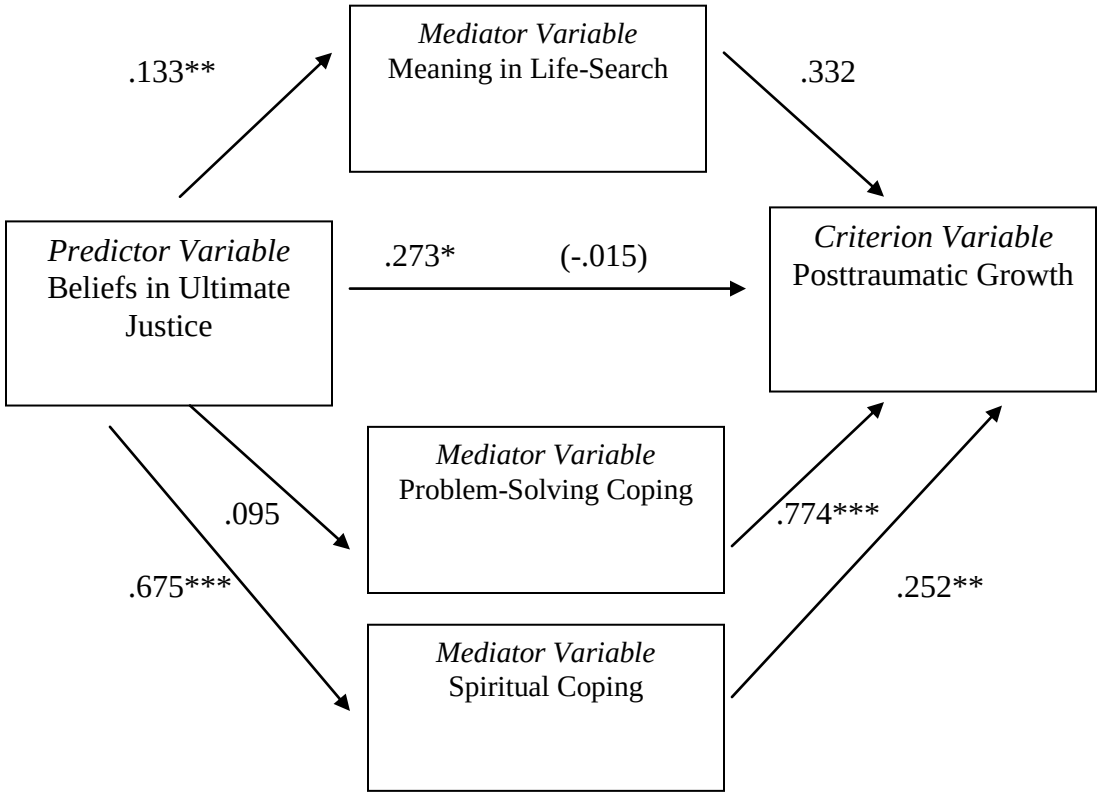

Figure 2. Standardized regression coefficients for the relationship between beliefs in ultimate justice and posttraumatic growth as mediated by the search for meaning in life, problem-solving coping, and spiritual coping. The standardized regression coefficient for the path between beliefs in ultimate justice and posttraumatic growth controlling for the search for meaning in life, problem-solving coping, and spiritual coping is in parentheses. $p < .05$. ** $p < .01$. *** $p < .001$.

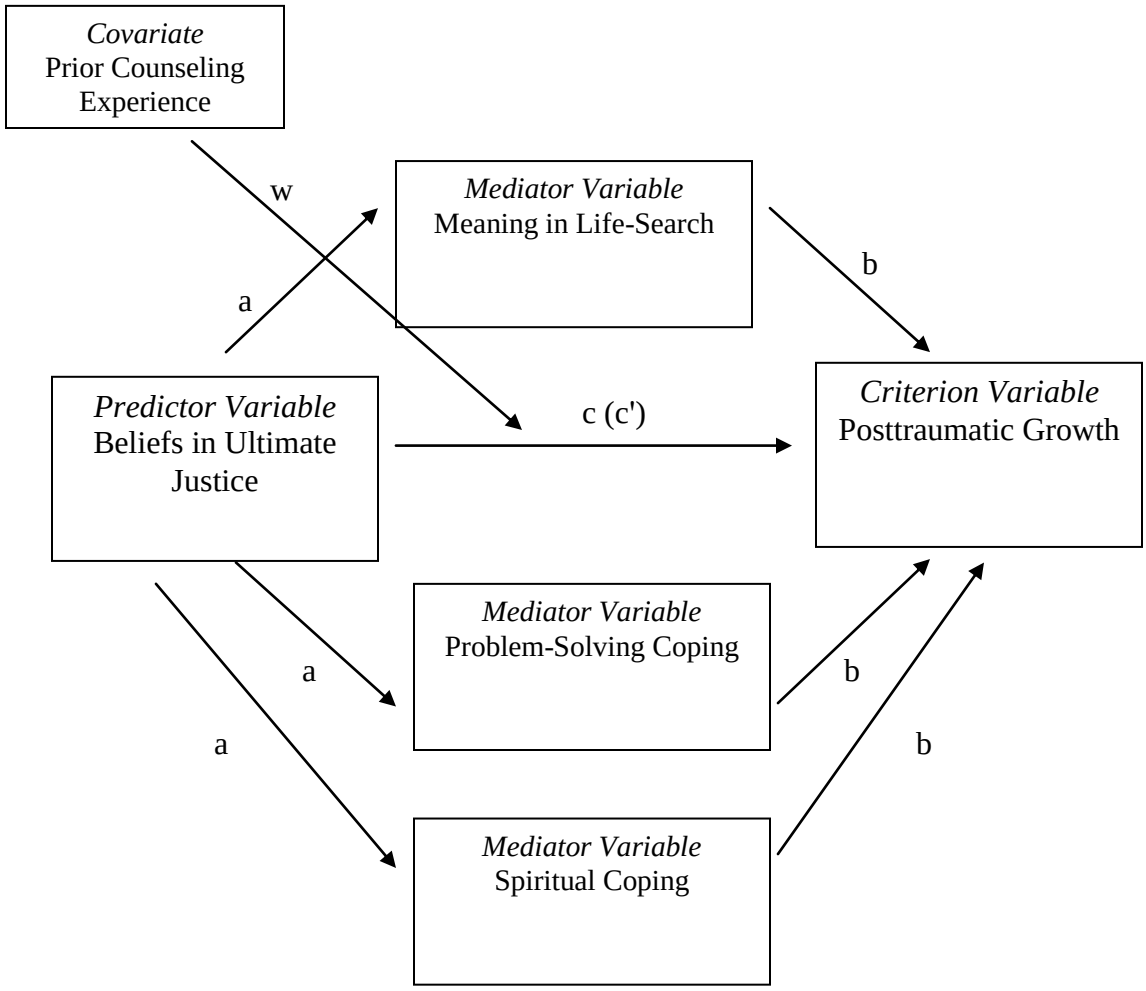

Figure 3. Model two – alternative path model.

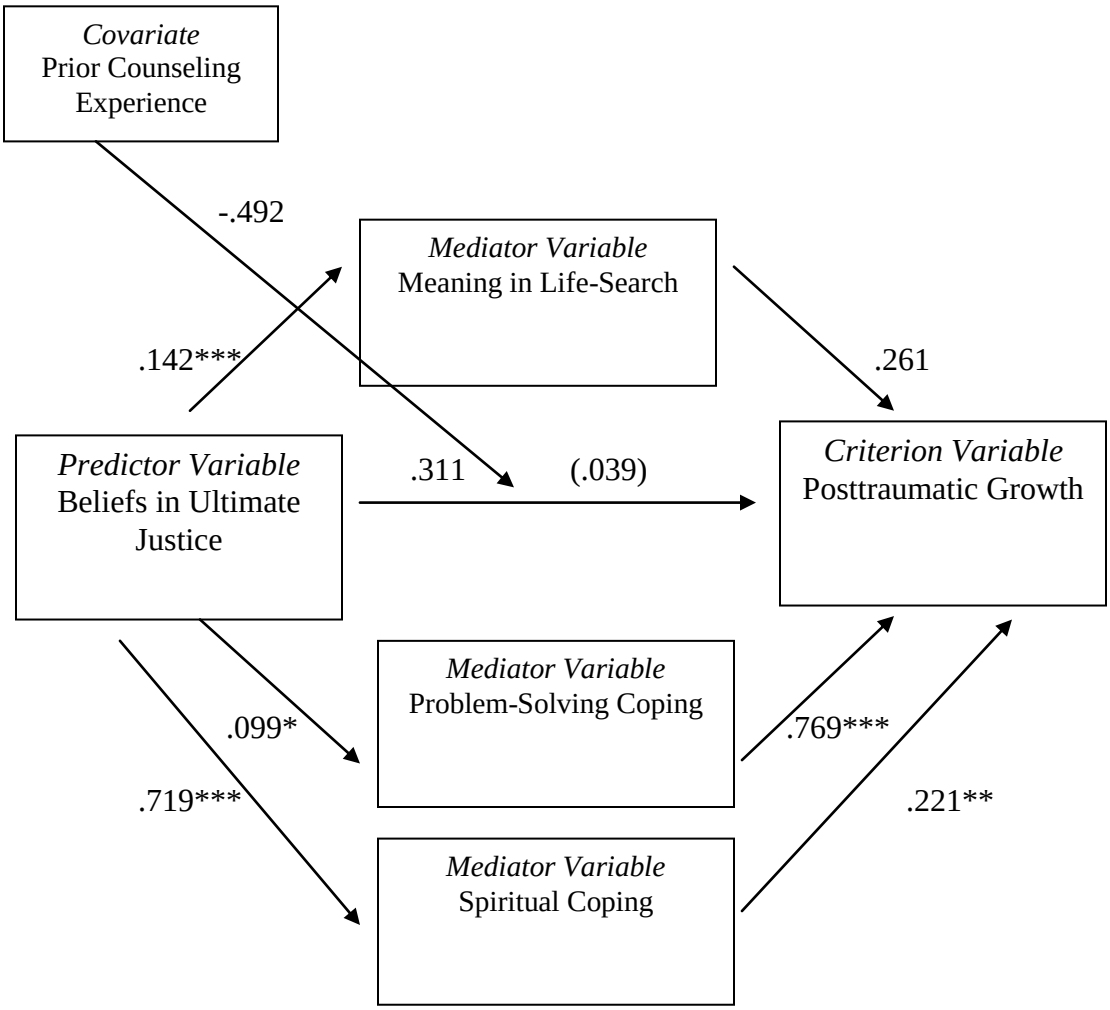

Figure 4. Standardized regression coefficients for the relationship between beliefs in ultimate justice and posttraumatic growth as mediated by the search for meaning in life, problem-solving coping, and spiritual coping while controlling for prior counseling. The standardized regression coefficient between beliefs in ultimate justice and posttraumatic growth controlling for the search for meaning in life, problem-solving coping, and spiritual coping is in parentheses. $p < .05$. ** $p < .01$. *** $p < .001$.

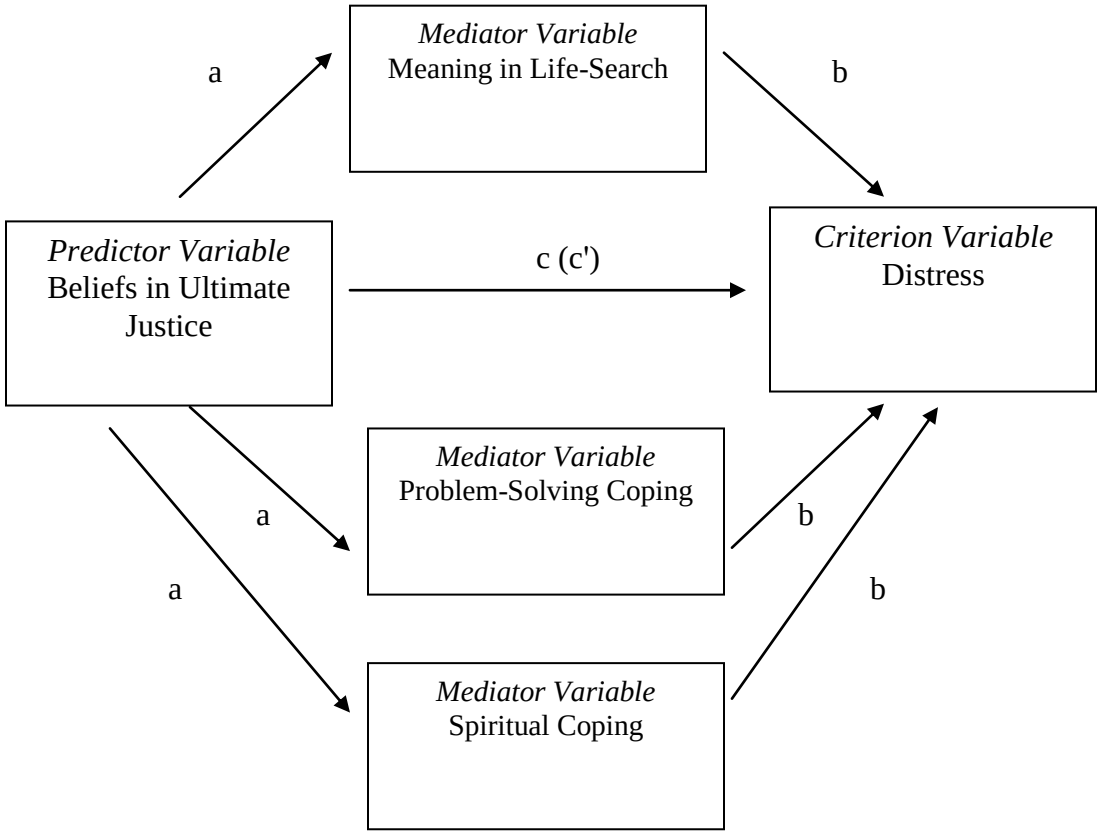

Figure 5. Model three - alternative path model.

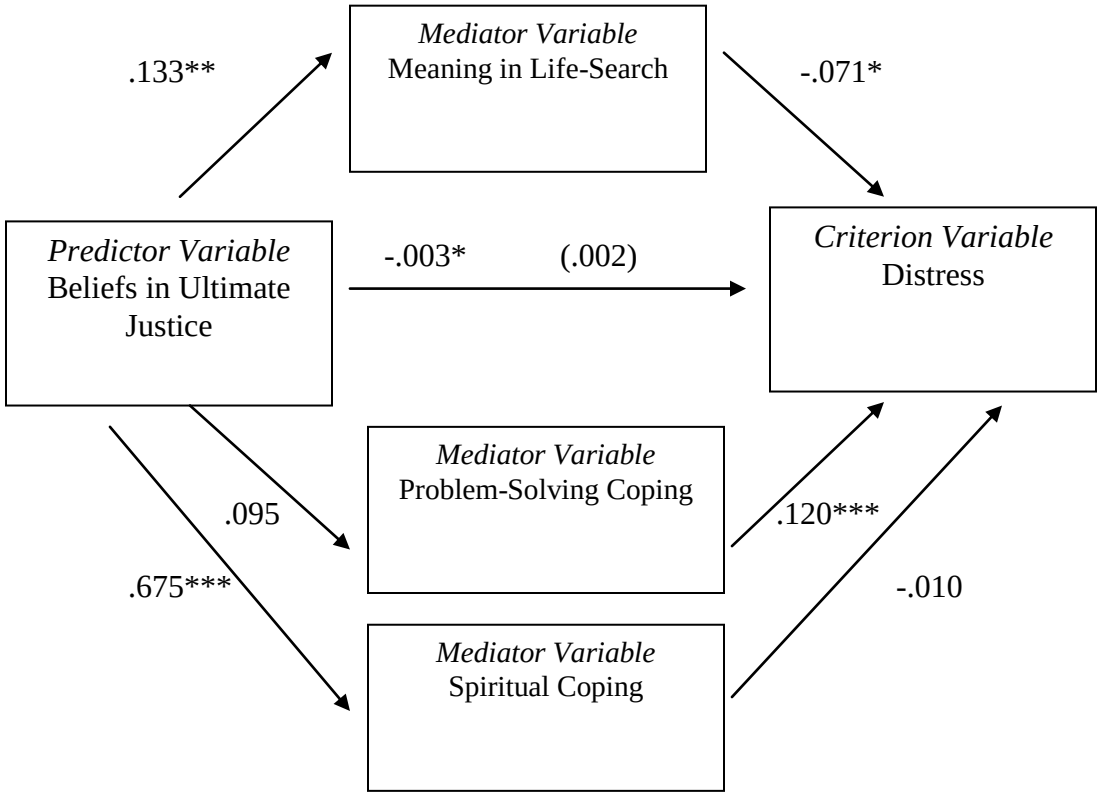

Figure 6. Standardized regression coefficients for the relationship between beliefs in ultimate justice and distress as mediated by the search for meaning in life, problem-solving coping, and spiritual coping. The standardized regression coefficient between beliefs in ultimate justice and posttraumatic growth controlling for the search for meaning in life, problem-solving coping, and spiritual coping is in parentheses. $p < .05$. ** $p < .01$. *** $p < .001$.

REFERENCES

Abbey, A. (1987). Perceptions of personal avoidability versus responsibility: How do they differ? *Basic & Applied Social Psychology, 8*(1/2), 3-19.

Ahrens, C.E., Abeling, S., Ahmad, S., & Hinman, J. (2010). Spirituality and well-being: The relationship between religious coping and recovery from sexual assault. *Journal of Interpersonal Violence, 25*(7), 1242-1263. doi: 10.1177/0886260509340533

Aymer, S. R. (2010). Clinical practice with African American men: What to consider and what to do. *Smith College Studies In Social Work, 80*(1), 20-34. doi:10.1080/00377310903504908

Bègue, L. (2002). Beliefs in justice and faith in people: Just world, religiosity, and interpersonal trust. *Personality and Individual Differences, 32*(3), 375-382. doi: 10.1016/s0191-8869(00)00224-5

Bell, N.N. (1999). *Specific factors and coping strategies that contribute to survivors' recovery from the trauma of rape.* 59, ProQuest Information & Learning, US. Retrieved from http://proxy.lib.siu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=1999-95002-198&site=ehost-live&scope=site

Boeschen, L.E., Koss, M.P., Figueredo, A.J., & Coan, J.A. (2001). Experiential avoidance and post-traumatic stress disorder: A cognitive mediational model of rape recovery. *Journal of Aggression, Maltreatment & Trauma, 4*(2), 211-245. doi: 10.1300/J146v04n02_10

Burt, M.R., & Katz, B.L. (1988). Coping strategies and recovery from rape. *Annals of the New York Academy of Sciences, 528,* 345-358. doi: 10.1111/j.1749-6632.1988.tb42086.x

Cecil, H., & Matson, S.C. (2006). Sexual victimization among African American adolescent females: Examination of the reliability and validity of the sexual experiences survey. *Journal of Interpersonal Violence, 21*(1), 89-104. doi: 10.1177/0886260505281606

Cromer, L.D., & Smyth, J.M. (2010). Making meaning of trauma: Trauma exposure doesn't tell the whole story. *Journal of Contemporary Psychotherapy, 40*(2), 65-72. doi: 10.1007/s10879-009-9130-8

Dalbert, C. (1998). Belief in a just world, well-being, and coping with an unjust fate. In L. Montada & M.J.. Lerner (Eds.), *Responses to victimizations and a belief in a just world* (pp. 87-105). New York: Plenum Press.

Dalbert, C., Montada, L., & Schmitt, M. (1987). Glaube an eine gerechte Welt als Motiv: Validierungskorrelate zweier Skalen. *Psychologische Beitrage, 29*(4), 596-615.

Davis, C.G., Wohl, M.J., & Verberg, N. (2007). Profiles of posttraumatic growth following an unjust loss. *Death Studies, 31*(8), 693-712. doi: 10.1080/07481180701490578

Davis, C.G., Wortman, C.B., Lehman, D.R., & Silver, R.C. (2000). Searching for meaning in loss: Are clinical assumptions correct? *Death Studies, 24*(6), 497-540. doi: 10.1080/07481180050121471

Fatima, I., & Suhail, K. (2010). Belief in a just world and subjective well-being: Mothers of normal and Down syndrome children. *International Journal of Psychology, 45*(6), 461-468. doi: 10.1080/00207591003774519

Fetchenhauer, D., Jacobs, G., and Belschak, F. (2005). Belief in a just world, causal attributions, and adjustment to sexual violence. *Social Justice Research, 18*(1), 25-42.

Folkman, S. (2008). The case for positive emotions in the stress process. *Anxiety, Stress & Coping, 21*(1), 3-14. doi: 10.1080/10615800701740457

Folkman, S., & Lazarus, R.S. (1991). Coping and emotion. In Alan Monat & Richard S. Lazarus (Eds.), *Stress and coping: An anthology (3rd ed.).* (pp. 207-227). New York, NY US: Columbia University Press.

Frankl, V.E. (2006). *Man's Search For Meaning*. Boston: Beacon Press.

Frazier, P., Conlon, A., and Glaser T. (2001). Postive and negative life changes following sexual assault. *Journal of Counseling and Clinical Psychology, 69*(6), 1048-1055.

Frazier, P., Tashiro, T., Berman, M., Steger, M., & Long, J. (2004). Correlates of levels and patterns of positive life changes following sexual assault. *Journal of Consulting and Clinical Psychology, 72*(1), 19-30. doi: 10.1037/0022-006x.72.1.19

Frazier, P.A., & Berman, M.I. (Eds.). (2008). *Posttraumatic growth following sexual assault*. Hoboken, NJ: John Wiley & Sons

Frazier, P.A., & Burnett, J.W. (1994). Immediate coping strategies among rape victims. *Journal of Counseling & Development, 72*(6), 633-639.

Furnham, A. (2003). Belief in a just world: Research progress over the past decade. *Personality and Individual Differences, 34*(5), 795-817. doi: 10.1016/s0191-8869(02)00072-7

Furnham, A., & Boston, N. (1996). Theories of rape and the just world. *Psychology, Crime & Law, 2*(3), 211-229. doi: 10.1080/10683169608409779

Grubaugh, A.L., & Resick, P.A. (2007). Posttraumatic growth in treatment-seeking female assault victims. *Psychiatry Quarterly, 78*, 145-155.

Heppner, P.P., & Baker, C.E. (1997). Applications of the problem solving inventory. *Measurement and Evaluation in Counseling and Development, 29*(4), 229-241.

Hughes, K.L., Sargeant, H., & Hawkes, A.L. (2011). Acceptability of the distress thermometer and problem list to community-based telephone cancer helpline operators, and to cancer patients and carers. *BMC Cancer*, *11*(1), 46-53. doi:10.1186/1471-2407-11-46.

Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New York, NY US: Free Press.

Janoff-Bulman, R. (2006). Schema-change perspectives on posttraumatic growth. In L.G. Calhoun, & Tedeschi, R.G. (Ed.), *Handbook of Posttraumatic Growth: Research and practice* (pp. 81-95). Mahwah, New Jersey: Psychology Press.

Joseph, S., & Linley, P.A. (2008). Psychological assessment of growth following adversity: A review. In S. Joseph, & Linley, P.A. (Ed.), *Trauma, Recovery, and Growth: Positive psychological perspectives on posttraumatic stress* (pp. 21-34). Hoboken, New Jersey John Wiley & Sons.

Kennedy, J.E., Davis, R.C., & Taylor, B.G. (1998). Changes in spirituality and well-being among victims of sexual assault. *Journal for the Scientific Study of Religion, 37*(2), 322.

Kiang, L., & Fuligni, A.J. (2010). Meaning in life as a mediator of ethnic identity and adjustment among adolescents from Latin, Asian, and European American backgrounds. *Journal of Youth and Adolescence*, *39*(11), 1253-1264. doi: 10.1007/s10964-009-9475-z

Koss, M.P., Abbey, A., Campbell, R., Cook, S., Norris, J., Testa, M., . . . White, J. (2007). Revising the SES: A collaborative process to improve assessment of sexual aggression and victimization. *Psychology of Women Quarterly, 31*(4), 357-370. doi: 10.1111/j.1471-6402.2007.00385.x

Koss, M.P., & Figueredo, A.J. (2004). Change in cognitive mediators of rape's impact on psychosocial health across 2 years of recovery. *Journal of Counseling and Clinical Psychology, 72*(6), 1063-1072.

Lerner, M.J.. (1980). *The belief in a just world :a fundamental delusion*. New York: Plenum Press.

Lindner, E.G. (2010). Traumatized by humiliation in times of globalization: Transforming humiliation into constructive meaning. In A. Kalayjian & D. Eugene (Eds.), *Mass trauma and emotional healing around the world: Rituals and practices for resilience and meaning-making, Vol 2: Human-made disasters.* (pp. 361-382). Santa Barbara, CA US: Praeger/ABC-CLIO.

Littleton, H., & Breitkopf, C.R. (2006). Coping with the experience of rape. *Psychology of Women Quarterly, 30*(1), 106-116. doi: 10.1111/j.1471-6402.2006.00267.x

Lucas, T., Alexander, S., Firestone, I., & Lebreton, J.M. (2008). Just world beliefs, perceived stress, and health behavior: The impact of a procedurally just world. *Psychology & Health, 23*(7), 849-865. doi: 10.1080/08870440701456020

Madsen, M.D., & Abell, N. (2010). Trauma resilience scale: Validation of protective factors associated with adaptation following violence. *Research on Social Work Practice, 20*(2), 223-233. doi: 10.1177/1049731509347853

Maes, J. (1992). *Konstruktion und Analyse eines mehrdimensionalen Gerechte-Welt-Frage-bogens* (Vol. Nr. 64). Trier: Universitat: Trier, Fachbereich I - Psychologie.

Maes, J. (1998a). Eight stages in the development of research on the construct of belief in a just world. In L. Montada & M.J.. Lerner (Eds.), *Responses to Victimization and Belief in a Just World* (pp. 163-185). New York: Plenum Press.

Maes, J. (1998b). Immanent justice and ultimate justice: Two ways of believing in justice. In L. Montada & M.J.. Lerner (Eds.), *Responses to victimization and belief in a just world* (pp. 9-40). New York: Plenum Press.

Maes, J., & Schmitt, M. (1999). More on ultimate and immanent justice: Results form the research project 'Justice as a problem within reunified Germany.'. *Social Justice Research, 12*(2), 65-78. doi: 10.1023/a:1022039624976

McElroy, S.K. (2010). *The role of meaning making in the association between multiple interpersonal traumas and post-traumatic adaptation.* 70, ProQuest Information & Learning, US. Retrieved from http://proxy.lib.siu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2010-99060-413&site=ehost-live&scope=site

Mitchell A.J. (2007). Pooled results from 38 analyses of the accuracy of distress thermometer and other ultra-short methods of detecting cancer-related mood disorder. *Journal of Clinical. Oncology, 25*, 4670–4681.

Mitchell A.J. (2008). The clinical significance of subjective memory complaints in the diagnosis of mild cognitive impairment and dementia: a meta-analysis**.** *International Journal of Geriatric Psychiatry*, *23*(11), 1191–1202.

Mitchell, A.J., Baker-Glenn, E.A., Granger, L., & Symonds, P. (2010). Can the distress thermometer be improved by additional mood domains? Part I. Initial validation of the emotion thermometers tool. *Psycho-Oncology*, *19*(2), 125-133. doi:10.1002/pon.1523

Mitchell, A.J., Baker-Glenn, E.A., Park, B., Granger, L., & Symonds, P. (2010). Can the distress thermometer be improved by additional mood domains? Part II. What is the optimal

combination of emotion thermometers?. *Psycho-Oncology, 19*(2), 134-140. doi:10.1002/pon.1557

Morris, B.A., Shakespeare-Finch, J., & Scott, J.L. (2007). Coping processes and dimensions of posttraumatic growth. *Australasian Journal of Disaster and Trauma Studies, 2007*(1).

Murray, J.D., Spadfore, J.A., & McIntosh, W.D. (2005). Belief in a just world and social perception: Evidence for automatic activation. *Journal of Social Psychology, 145*(1), 35-47.

Pargament, K.L., & Mahoney, A. (2009). Spirituality: The search for the sacred. In S.J. Lopez & C.R. Snyder (Eds.), *Oxford Handbook of Positive Psychology* (2nd ed.). New York: Oxford University Press.

Park, C.L. (2008). Testing the meaning making model of coping with loss. *Journal of Social and Clinical Psychology, 27*(9), 970-994. doi: 10.1521/jscp.2008.27.9.970

Park, C.L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin, 136*(2), 257-301. doi: 10.1037/a0018301

Park, C.L., & Ai, A.L. (2006). Meaning making and growth: New directions for research on survivors of trauma. *Journal of Loss and Trauma, 11*(5), 389-407. doi: 10.1080/15325020600685295

Park, C.L., Edmondson, D., Fenster, J.R. , & Blank, T.O. (2008). Meaning making and psychological adjustment following cancer: The mediating roles of growth, life meaning, and restored just-world beliefs. *Journal of Clinical and Counseling Psychology, 76*(5), 863-875. doi: 10.1037/a0013348

Park, C.L. (2005). Religion as a meaning-making framework in coping with life stress. *Journal of Social Issues, 61*(4), 707-729. doi: 10.1111/j.1540-4560.2005.00428.x

Pipinelli, A., & Kalayjian, A. (2010). Gender and genocide: Armenian and Greek women finding positive meaning in the horror. In A. Kalayjian & D. Eugene (Eds.), *Mass trauma and emotional healing around the world: Rituals and practices for resilience and meaning-making, Vol 2: Human-made disasters.* (pp. 307-325). Santa Barbara, CA US: Praeger/ABC-CLIO.

Prati, G., & Pietrantoni, L. (2009). Optimism, social support, and coping strategies as factors contributing to posttraumatic growth: A meta-analysis. *Journal of Loss and Trauma, 14*(5), 364-388. doi: 10.1080/15325020902724271

Resick, P.A. (2001). *Stress and Trauma*. New York: Psychology Press.

Sarid, A. (1996). *Assumptive world theory and its relation to psychological trauma.* 56, ProQuest Information & Learning, US. Retrieved from http://proxy.lib.siu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=1996-95003-276&site=ehost-live&scope=site

Schaefer, J.A., & Moos, R.H. (1992). Life crises and personal growth. In Bruce N. Carpenter (Ed.), *Personal coping: Theory, research, and application.* (pp. 149-170). Westport, CT US: Praeger Publishers/Greenwood Publishing Group.

Schaefer, J.A., & Moos, R.H. (1998). The context for posttraumatic growth: Life crises, individual and social resources, and coping. In Richard G. Tedeschi, Crystal L. Park & Lawrence G. Calhoun (Eds.), *Posttraumatic growth: Positive changes in the aftermath of crisis.* (pp. 99-125). Mahwah, NJ US: Lawrence Erlbaum Associates Publishers.

Steger, M.F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*(1), 80-93. doi: 10.1037/0022-0167.53.1.80

Tedeschi, R.G., & Calhoun, L.G. (1996). The posttraumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*(3), 455-472. doi: 10.1002/jts.2490090305

Tedeschi, R.G., Park, C.L., & Calhoun, L.G. (1998). Posttraumatic growth: Positive changes in the aftermath of crisis. In Irving B. Weiner (Ed.), *Personality and Clinical Psychology* (pp. 1-22). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Thompson, S.C. (1985). Finding positive meaning in a stressful event and coping. *Basic & Applied Social Psychology, 6*(4), 279-295.

Ullman, S.E. (1996). Social reactions, coping strategies, and self-blame attributions in adjustment to sexual assault. *Psychology of Women Quarterly, 20*(4), 505.

Wright, M., Crawford, E., & Sebastian, K. (2007). Positive resolution of childhood sexual abuse experiences: The role of coping, benefit-finding and meaning-making. *Journal of Family Violence, 22*(7), 597-608. doi: 10.1007/s10896-007-9111-1

APPENDICIE

APPENDICIES

APPENDIX A: RECRUITMENT EMAIL

From: Danielle Fetty/Yu-Wei Wang
Subject: Research request for sexual assault survivors

Dear Mr./Ms./Dr. _____ (their names):

Hope this email finds you well. We are a group of researchers who work with and care about sexual assault survivors. In order to understand survivors' healing after sexual trauma, we are conducting a web-based survey. The findings will help us understand survivors' experiences of sexual violence and subsequent healing, and develop programs that benefit the growth and quality of life of survivors of sexual assault. We would greatly appreciate it if you would forward our research announcement to survivors and/or sexual violence advocacy/resource centers in your organizations. Individuals who choose to participate will have the opportunity be entered into a lottery for **one of five $15 Walmart gift cards.**

Below is a message that you can copy and paste to send through your listserv.

We would greatly appreciate it if you would be able to reply to our email and let us know whether you would be willing to send this message to agencies and survivors. Your email address was obtained from your university or organization website. If you have any other questions or concerns, please feel free to contact us via email (study.siu@gmail.com) as well. Thank you for your time and help.

Sincerely,

Danielle Fetty, B.A.
Graduate Student
Department of Psychology
Southern Illinois University

Yu-Wei Wang, Ph.D.
Associate Professor
Department of Psychology
Southern Illinois University

Dear Survivor or Sexual Assault Organization:

We are a group that consists of people who work with and care about survivors of sexual violence at Southern Illinois University Carbondale. In order to understand about sexual assault survivors' traumatic experiences, we are conducting a web-based survey and are writing to invite you to participate in our research study. Your responses will help us understand sexual assault

survivors' experiences of sexual violence and subsequent healing, and develop programs that benefit the growth and quality of life of survivors of sexual violence.

The entire study should take approximately 20 minutes. Those who choose to participate will have the opportunity to be entered into a lottery **one of the five $15 Walmart gift cards**.

For more information about the study and to participate, please go to: [specific web address to be added]

The answers you provide will be kept completely **anonymous**. You will not be asked to provide your name on the survey. If you choose to receive your gift card, you will only be requested to provide an email address or phone number for the sole purpose of contacting you regarding where to send your gift card. Your email address or phone number will **NOT** be linked to your responses on the questionnaire. Also, it is possible that you may experience some discomfort while answering questions related to sexual trauma; otherwise, there are no known risks involved in this study beyond those of everyday life. If you ever feel uncomfortable or object to any of the questions, please discontinue your participation.

Thank you in advance for your participation! Please feel free to forward this email to anyone who would be interested in participating in our study.

Note: Please let us know if you would like to be removed from any future mailings from us regarding this study. If you do not respond to this email or return the opt-out message, you will be contacted again with this request 2 times during the next 2 months. If you have questions about this survey or the procedures in this project, please contact Danielle Fetty at study.siu@gmail.com, or Dr. Yu-Wei Wang (email: study@siu.edu), Associate Professor of Psychology, Southern Illinois University, Carbondale, 62901-6502.

This project has been reviewed and approved by the SIUC Human Subjects Committee. Questions concerning your rights as a participant in this research may be addressed to the Committee Chairperson, Office of Research Development and Administration, SIUC, Carbondale, IL 62901-4709. Phone (618) 453-4533. E-mail: siuhsc@siu.edu

APPENDIX B: INFORMED CONSENT

NOTE: In order to participate in the study, you must be (a) **18 years of age or older** (b) **female** and (c) **a survivor of sexual violence**.

We are a group that consists of people who work with and care about survivors of sexual violence at Southern Illinois University Carbondale. In order to understand about sexual assault survivors' traumatic experiences, we are conducting a web-based survey and are writing to invite you to participate in our research study. Your responses will help us understand survivors' experiences of sexual violence and subsequent healing, and develop programs that benefit the growth and quality of life of survivors of sexual violence.

Participation is voluntary, and you are free to stop or refuse to participate in this study at any time without penalty. If you choose to participate in the study, it will take approximately 20 minutes of your time. After your informed consent has been obtained, you will be directed to a secured website and asked to indicate the degree to which each item pertains to you.

After completion of the survey, you will have the opportunity to either enter your email address or phone number to be entered into a lottery in which you can win **one of the five $15 Walmart gift cards**. To receive your gift card, you will be asked to provide an email address or phone number for the sole purpose of contacting you so that you may receive your gift card. Your email address or phone number will **NOT** be linked to your responses on the questionnaire, and **NO IP addresses will be recorded**; responses and participants' contact information will be kept in separate files and locations. Therefore, providing your email address or phone number to receive your gift card will not affect the anonymity and confidentiality of your responses.

Because IP addresses are not collected, responses cannot be linked to you or your computer. You will NOT be asked to provide your name on the survey. Other participants in the study do not have access to the data. The obtained data will also be kept in a secured website; only Danielle Fetty and Dr. Wang will have access to the data. The results from this study may be published in the professional journals or presented in a conference, but you will not be identified as an individual. Instead, results will be reported as group average. It is possible that you may experience some discomfort while answering questions related to sexual trauma; otherwise, there are no known risks involved in this study beyond those of everyday life. If you ever feel uncomfortable or object to any of the questions, please discontinue your participation. If you need to speak with someone immediately or if you find yourself in a crisis or emergency situation, several resources are available (e.g., the Rape Abuse and Incest National Network Crisis Line: 1-800-656-HOPE; Live 24/7 Chat at http://www.rainn.org/). In an emergency, you also have the options of calling 911 or going to your nearest hospital emergency room.

If you have questions about this survey or the procedures in this project, please contact: Danielle Fetty, at 618-453-3520 (email: study.siu@gmail.com), Southern Illinois University, Carbondale, 62901-6502, or Yu-Wei Wang, Ph.D. (email: study@siu.edu), Associate Professor of Psychology, Southern Illinois University, Carbondale, 62901-6502.

Thank you for taking the time to assist us in this research.

This project has been reviewed and approved by the SIUC Human Subjects Committee. Questions concerning your rights as a participant in this research may be addressed to the Committee Chairperson, Office of Research Development and Administration, Southern Illinois University, Carbondale, IL 62901-4709. Phone (618) 453-4533. E-mail: siuhsc@siu.edu

By clicking on the **"NEXT"** option, you indicate that you are a female sexual assault survivor who is at least 18 years of age, you are agreeing to participate in this study, and you understand your right to refuse to participate at any time.

If you are NOT a female sexual assault survivor who is at least 18 years of age, or you do NOT agree with the study's terms, please exit this screen and terminate your online survey session.

APPENDIX C: STUDY FEEDBACK

As researchers who care about sexual assault survivors, we have strived to create a study which is sensitive to survivors' experiences. We hope you will provide feedback about any reactions you had to this study:

(Please provide comments in the box below):

APPENDIX D: DEBRIEFING FORM

Thank you for taking the time to participate in this study! Your participation has contributed greatly to a better understanding of women's experience with sexual trauma. Other participants completed the same questionnaires as you did. Your responses will help us understand the specific ways women heal after sexual assault, and some of the factors that contribute to that healing.

The specific purpose of this study was to examine how certain beliefs (such as beliefs in ultimate justice) may influence a survivor after her trauma, and how different ways of coping may help her heal. <u>All survivors heal and cope in their own way</u>, and there is no right or wrong path in this journey. <u>No one deserves to experience sexual violence</u>. Through this research, you have helped us learn more about how to help survivors heal after an act of injustice.

It is an important goal in psychology to provide affirming and effective services for all clients, and your participation has contributed to this advancement. This research can also contribute to the women's psychology and positive psychology literature addressing the importance of positive emotions, coping, and beliefs after traumatic experiences. If you have any questions about this study, please feel free to contact Danielle Fetty by email at study.siu@gmail.com. You may also contact Dr. Yu-Wei Wang by email at study@siu.edu.

Please **click here** to download the PDF document if you are interested in obtaining a list of helpful resources for sexual assault survivors.

To express our appreciation for your participation, you will now have the opportunity to enter your email address or phone number to be entered into a lottery for the chance to win one of five $15 Walmart gift cards.

To receive your gift card, you will need to provide an email address or phone number for the sole purpose of contacting you with the gift card information. **Remember that your email address or phone number will not be linked to your responses to the questionnaire**; they will be kept in separate files and locations. Therefore, providing your email address or phone number to receive your gift card will not affect the anonymity and confidentiality of your responses.

If you agree to provide your email address or phone number to receive your gift card, please enter it in the box below. If selected, you will be contacted by the primary researcher through the email address or phone number you provide, at which time we will a request mailing or email address for sending the gift card. Gift cards may be received electronically via email, or by mail. If you choose to provide a physical mailing address, gifts cards will be addressed to "Resident" in order to protect confidentiality.

APPENDIX E: LIST OF HELPFUL RESOURCES

List of Helpful Resources

National Resources

RAINN (Rape Abuse and Incest National Network)
27/7 Toll free Hotline: 1-800-656-HOPE
Website: http://rainn.org

National Center for Victims of Crime
Phone: 1-800-394-2255
1-800-211-7996 (TTY)
Website: http://www.ncvc.org/ncvc/main.aspx?dbID=dash_Home

National Sexual Violence Resource Center
Phone: 1-877-739-3895
Website: http://www.nsvrc.org/

Southern Illinois Resources

Counseling

Southern Illinois University Counseling Center: Phone: 618/453-5371
Website: http://counselingcenter.siuc.edu/

Southern Illinois University Clinical Center: Phone: 618/453-2361
Website: http://clinicalcenter.siuc.edu/

Counseling & Volunteer Opportunities

The Women's Center (Carbondale, IL): Business- (618) 549-4807
24 Hour Toll Free Hotline: 1-800-334-2094
Website: http://www.thewomensctr.org/index.php

For Further Reading

Folkman, S. (2008). The case for positive emotions in the stress process. *Anxiety, Stress & Coping, 21*(1), 3-14. doi: 10.1080/10615800701740457

Park, C.L., & Ai, A.L. (2006). Meaning making and growth: New directions for research on survivors of trauma. *Journal of Loss and Trauma, 11*(5), 389-407. doi: 10.1080/15325020600685295

Tedeschi, R.G., Park, C.L., & Calhoun, L.G. (1998). Posttraumatic growth: Positive changes in the aftermath of crisis. In Irving B. Weiner (Ed.), *Personality and Clinical Psychology* (pp. 1-22). Mahwah, NJ: Lawrence Erlbaum Associates.

Thompson, S.C. (1985). Finding positive meaning in a stressful event and coping. *Basic & Applied Social Psychology, 6*(4), 279-295.

VITA

Graduate School
Southern Illinois University

Danielle G. Fetty

dfetty1@gmail.com

University of Tennessee Knoxville
Bachelor of Arts, Psychology, May 2009

Thesis Title:

Is there justice in trauma? A path analysis of belief in a just world, coping, meaning making, and posttraumatic growth in female sexual assault survivors.

Major Professor: Yu-Wei Wang, PhD.